

ENVIRONMENTAL IMPACT STATEMENT  
APPENDIX L  
FINAL SUPPLEMENT  
TRANSMISSION PROJECT  
D.O.E.  
MAINE, NEW HAMPSHIRE & VERMONT

---

# **Dickey-Lincoln School Lakes**

JUNE 1981

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App.L  
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**Army Corps  
of Engineers**  
New England Division

FINAL  
ENVIRONMENTAL IMPACT STATEMENT  
SUPPLEMENT

12439067-  
DICKY-LINCOLN SCHOOL LAKES  
TRANSMISSION PROJECT

Prepared by

U.S. Department of Energy  
Federal Office Building  
Bangor, Maine 04401

## Summary

## SUMMARY

### DICKEY-LINCOLN SCHOOL LAKES TRANSMISSION PROJECT

( ) DRAFT (SUPPLEMENT)

(X) FINAL ENVIRONMENTAL STATEMENT

Responsible Office: Department of Energy  
Bonneville Power Administration  
P. O. Box 3621  
Portland, Oregon 97208  
Attention: Mr. Timothy J. Murray  
1-503-234-3361 x4611

1. Type of Action: (X) ADMINISTRATIVE ( ) LEGISLATIVE

2. Description of Action: The proposed action is the construction of: a steel double-circuit 345-kV transmission line from Moore Substation near Littleton, New Hampshire, to Comerford Substation near Monroe, New Hampshire; a 345-kV wood pole transmission line from Comerford Substation to Webster Substation near Franklin, New Hampshire. The total length of the proposed line is 73.8 miles. Sixty-nine (69) miles of the proposed line would be built on existing cleared right-of-way owned by the New England Power Company, assuming that final agreement with the company will accord with our established preliminary arrangements. It has not been determined what organization would construct the different facilities required to integrate the generation into NEPOOL. For the purposes of this impact statement, it is assumed that the Federal Government would construct, operate, and maintain the facilities.

3. Summary of Environmental Impacts: The proposed action would commit a total of approximately 55 acres of land to right-of-way expansion. Forty-five acres of forest cover would be removed from production, representing an estimated annual loss of 30 cords of timber growth. The equivalent annual stumpage value is \$465.00; the resultant tax loss is \$46.00.

One residence east of the Webster Substation may have to be relocated. The route will cross approximately 5 acres of agricultural land.

A total of 51 streams and 13 wetlands may be affected by increased sedimentation during the construction phase. Ledges exhibiting potential rare plant habitat qualities are crossed at a number of points along 11 miles of the proposed route. Of special concern is a peregrine falcon reintroduction site near the northwestern route corridor which could be adversely impacted by the facility.

Numerous linear recreational resources are crossed by the proposed route. Most significant among these is the crossing of the Appalachian Trail and of its proposed relocation in the vicinity of Lake Tarleton and Mt. Mist. Rivers crossed include the Ammonoosuc, the Smith, and the South Branch of the Baker River, all designated potential State Recreational or Scenic Rivers. Five highways crossed are designated fall-foliage, scenic, sightseeing, and/or bicycle routes. The proposed route also traverses nearly 9 miles of the White Mountain National Forest and its Proclamation Area, but within an existing right-of-way.

The proposed 165-foot high double-circuit steel towers will have high visual impacts on residential, scenic, and recreational resources along 6.5 miles of the proposed route in the vicinity of the Moore and Comerford Reservoirs. Some visual impact will occur in the vicinity of Boston Hill and along the eastern slope of Flag Pole Hill near the Webster Substation.

A direct impact on the remains of an old stone foundation wall, a potential archeological site which lies along the centerline just west of Wentworth, can be avoided by proper location of the line structures.

4. Alternatives Considered:

- a. Alternative of not building the transmission lines
- b. Alternative of use of existing transmission system
- c. Alternative transmission routes
- d. Alternative types of tower and reconductoring

5. Draft Supplement made available to Environmental Protection Agency and the public: \_\_\_\_\_

6. Comments Requested From:

Advisory Council on Historic Preservation  
Department of Agriculture  
Department of Commerce  
Department of Defense  
Department of Health and Human Services  
Department of Housing & Urban Development  
Department of Interior  
Department of State  
Department of Transportation  
Environmental Protection Agency  
Federal Energy Regulatory Commission,  
Inland Water Directorate, Environment Canada  
Interstate Commerce Commission  
U.S. Army Corps of Engineers, New England Division  
U.S. Forest Service, White Mountain National Forest  
U.S. Geological Survey

Maine State Clearinghouse Coordinator, A-95  
New Hampshire Coordinator of Federal Funds  
Vermont State A-95 Coordinator  
Massachusetts A-95 Coordinator, Boston, MA.

NOTE: The above State A-95 Clearinghouses forward requests for comments to all appropriate State Offices and coordinate State agency review of Draft EIS.

Maine State Historic Preservation Commission  
New Hampshire Division of Historic Preservation  
Vermont Division of Historic Preservation

Androscoggin Regional Planning Commission, ME.  
North Kennebec Regional Planning Commission, ME.  
Northern Maine Regional Planning Commission, ME.  
Penobscot Valley Regional Planning Commission, ME.  
North Country Council, NH.  
Lakes Region Planning Commission  
Central New Hampshire Regional Planning Commission  
Central Vermont Planning Commission, VT.  
Chittenden County Regional Planning Commission, VT.  
Northeast Vermont Development Association, VT.

NOTE: The Regional Planning Commissions above act as area-wide A-95 Coordinators. As such, they forward requests for comments to appropriate towns and local agencies and coordinate Draft EIS review. All organized towns along the alternative routes are included in this review process.

Boise Cascade Corp., Rumford, ME.  
Brown Paper Company, Berlin, NH.  
Dead River Company, Bangor, ME.  
Diamond International Corp., Old Town, ME.  
Dunn Heirs, Ashland, ME.  
G. Pierce Webber, Bangor, ME.  
Georgia Pacific Corp., Woodland, ME.  
Great Northern Paper Co., Millinocket, ME.  
J.M. Huber Corp., Old Town, ME.  
International Paper Co., Jay, ME.  
St. Regis Paper Co., Bucksport, ME.  
Scott Paper Co., Winslow, ME.  
Seven Islands Land Co., Bangor, ME.  
James W. Sewall Company, Old Town, ME.

Associated General Contractors of Maine

Business & Industry Association of New Hampshire  
Carpenter's Local 621, Brewer, ME.  
Economic Resources Council, ME.  
Industrial Development Council of Maine  
International Brotherhood of Electrical Workers, MA.  
Maine AFL-CIO  
Maine Electric Cooperative Association  
Maine Citizens for Dickey-Lincoln  
Maine State Chamber of Commerce, Portland, ME.  
Valley Residents Against Dickey-Lincoln, Ft. Kent, ME.  
Vermont State Chamber of Commerce

American Rivers Conservation Council, D.C.

Maine Association of Conservation Commissions  
Maine Forest Products Council, ME.  
Massachusetts Division of Water Pollution Control  
New England Governor's Conference, MA.  
New England Regional Commission, MA.  
New England River Basins Commission, MA.  
Federal Regional Council of New England  
New Hampshire Association of Conservation Commissions  
Office of Legislative Research, Hartford, CT.  
Society of American Foresters, ME.

American Association of University Women, ME.  
Audubon Society of Maine  
Audubon Society of New Hampshire  
Appalachian Mountain Club, MA.  
Appalachian Mountain Club, NH.  
Bates Outing Club, ME.  
Colby Environmental Council, ME.  
Northwestern University Center for Urban Affairs  
Connecticut River Watershed Council  
Conservation Law Foundation of New England, MA.  
Conservation Society of Vermont  
Dartmouth College, Hanover, NH.  
Environmental Defense Fund  
Dartmouth Outing Club, NH.  
Environmental Coalition  
Friends of the St. John, MA.  
Friends of the Earth  
Forum on New Hampshire Future  
Institute of Natural and Environmental Resources,  
Univ. of N.H., Durham, NH.  
Izaak Walton League of America  
Garden Club Federation, ME.  
Grafton County Soil Conservation District

Green Mountain Club, VT.  
Harvard Environmental Law Society  
Land Use Foundation of New Hampshire  
Land & Waters Resources Institute, UM-Orono, ME.  
League of Women Voters, ME.  
Maine Public Interest Research Group  
Maine Association of Planners  
Maine Archeological Society  
Legislative Utility Conservation Council  
Midcoast Audubon Society, ME.  
National Audubon Society, Inc., Washington, D.C.  
National Wildlife Federation, Washington, D.C.  
Nature Conservancy, MA.  
Nature Conservancy, NH.

National Parks and Conservation Association  
 Natural Resources Council of Maine  
 Natural Resources Council of Vermont  
 New England Forestry Foundation, Inc.  
 New Hampshire Farm Bureau  
 New Hampshire Snowmobiling Association  
 New Hampshire Planner's Association  
 New England Natural Resources Center, MA.  
 New Hampshire Wildlife Federation, NH.  
 Penobscot Paddle & Chowder Society, ME.  
 Sierra Club, MA.  
 Simon's Rock Early College, ME.  
 Society for Protection of New Hampshire Forests  
 SPACE: Statewide Program to Conserve Our Environment, NH.  
 Sportsman Alliance, Gardiner, ME.  
 Sunkhaze Chapter of Trout Unlimited, Bangor, ME.  
 The Association of Aroostook Indians, Inc.  
 Timberland Owners Association  
 United Fly Tyers, Inc.  
 Unity College, ME.  
 Wildlife Management Institute

Bangor Hydroelectric Company  
 Boston Edison Company, MA.  
 Central Maine Power Company  
 Eastern Maine Electric Coop.  
 Eastern Utilities Associates Service Corporation, MA.  
 Fitchburg Gas and Electric Light Co., MA.  
 Green Mountain Power Corp., VT.  
 Maine Public Service Company  
 Massachusetts Municipal Wholesale Electric Company, MA.  
 Municipal Electric Association of Vermont  
 New England Electric Gas and Electric Associates, MA.  
 New England Electric Service, MA. (NEES)  
 New England Power Company  
 New England Power Planning, MA.  
 New Hampshire Electric Cooperative  
 Newport Electric Corporation, RI.  
 Northeast Public Power Association, MA.  
 Northeast Utilities Service Co., CT. (NESCO)  
 Public Service Co. of New Hampshire  
 United Illuminating Company, New Haven, CT. (EUA)  
 Vermont Electric Power Company  
 Debouoise and Liberman  
 Mr. Charles Dibner  
 Mr. Frank Christ  
 Maine Public Service Company, ME.  
 Chas. T. Main, Inc.  
 Mr. and Mrs. Brian Pinette

## **Table of Contents**

## Table of Contents

<u>Section</u>	<u>Page</u>
Summary.....	1
List of Tables.....	9
List of Figures.....	10
Preface.....	11
1.0 DESCRIPTION OF THE PROPOSAL.....	14
1.01 Introduction.....	14
1.01.1 Description of the Dickey-Lincoln School Lakes Project.....	17
1.02 Study Methodology.....	17
1.02.1 Phase I - System Planning Studies.....	17
1.02.2 Phase II - Corridor Assessment and Plan of Service Proposal.....	18
1.02.3 Phase III - Route Identification and Evaluation.....	19
1.02.3.1 Route Identification Studies.....	19
1.02.3.2 Route Impact Studies.....	19
1.02.3.3 Route Evaluation.....	19
1.03 Description of Proposed Facilities.....	19
1.03.1 Proposed Transmission Lines.....	20
1.03.2 Proposed Transmission Route.....	21
1.03.3 Design Criteria.....	21
1.03.4 Construction Sequence.....	21
1.03.5 Maintenance.....	21
1.04 Construction Schedule.....	22
1.05 Cost Estimate.....	22
2.0 DESCRIPTION OF THE ENVIRONMENT WITHOUT THE PROPOSAL.....	24
2.01 Geography.....	24
2.02 Geology.....	24
2.03 Soils.....	25
2.04 Mineral and Aggregate Deposits.....	25
2.05 Climate and Air Quality.....	26
2.06 Surface Water.....	26
2.06.1 Aquatic Resources Inventory.....	26
2.06.2 Inventory of Water Features.....	26
2.06.3 Aquatic Resources Ecological Values.....	26
2.06.4 Water Quality.....	27
2.06.5 Floodplains and Wetlands.....	27
2.07 Vegetative Communities.....	28
2.07.1 Plant Communities.....	28
2.07.2 Rare, Threatened, or Endangered Plant Species.....	29
2.08 Wildlife.....	29
2.08.1 Wildlife Values.....	29
2.08.2 Rare, Threatened or Endangered Wildlife Species.....	30
2.09 Socioeconomics.....	30
2.10 Existing Land Use.....	31

<u>Section</u>	<u>Table of Contents (Cont'd)</u>	<u>Page</u>
2.11	Proposed Land Use.....	33
2.12	Recreation.....	33
2.13	Visual.....	33
2.13.1	Visual Landscape Quality.....	34
2.13.2	Visual Site Attractiveness.....	34
2.13.3	Visually Sensitive Land Uses.....	34
2.14	Forest Resources.....	38
2.15	Cultural Resources.....	38
2.15.1	Historic Resources.....	38
2.15.2	Archeological Resources.....	39
3.0	THE ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION.....	40
3.01	Ecological Relationships.....	40
3.02	Geology.....	40
3.03	Soils and Topography.....	40
3.04	Mineral and Aggregate Resources.....	40
3.05	Atmosphere.....	41
3.06	Aquatic Ecosystems.....	41
3.07	Vegetation.....	42
3.08	Wildlife.....	43
3.09	Socioeconomic Impacts.....	44
3.09.1	General Impacts.....	44
3.09.2	Region Specific Impacts.....	45
3.10	Existing Land Use.....	45
3.11	Proposed Land Use.....	47
3.12	Recreation.....	47
3.12.1	Preemptive Impacts.....	47
3.12.2	Recreational Viewer Impacts.....	48
3.13	Visual.....	48
3.13.1	Viewer Impacts.....	49
3.13.2	Landscape Quality Impacts.....	49
3.13.3	Site Attractiveness Impacts.....	49
3.14	Forestry Resources.....	50
3.15	Cultural Resources.....	50
3.15.1	Historic.....	50
3.15.2	Archeological.....	50
3.16	Electrical Effects.....	50
4.0	MITIGATION MEASURES INCLUDED IN THE PROPOSED ACTION.....	51
5.0	ANY ADVERSE EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED.....	52
5.01	Geotechnical Resources.....	52
5.02	Atmospheric Resources.....	52
5.03	Ecological Resources.....	52
5.04	Land Use Resources.....	53
5.05	Socioeconomic Resources.....	53
5.06	Visual Resources.....	53
5.07	Recreational Resources.....	53
5.08	Historic-Archeologic Resources.....	54

<u>Section</u>	<u>Table of Contents (Cont'd)</u>	<u>Page</u>
6.0	THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY.....	55
6.01	Resource Relationships.....	55
6.01.1	Geotechnical Resources.....	55
6.01.2	Atmospheric Resources.....	55
6.01.3	Ecological Resources.....	55
6.01.4	Land Use.....	55
6.01.5	Socioeconomic Resource.....	56
6.01.6	Visual Resources.....	56
6.01.7	Recreation Resources.....	56
6.01.8	Historic-Archeologic Resources.....	56
6.02	Trends Affecting Ecological Interrelationships.....	56
6.03	Long-term Risks to Health and Safety.....	57
7.0	ANY IRREVERSIBLE AND IRRETRIEVABLE RESOURCES WHICH WOULD BE INVOLVED IF THE PROJECT SHOULD BE IMPLEMENTED.....	58
7.01	Geotechnical Resources.....	58
7.02	Atmospheric Resources.....	58
7.03	Ecological Resources.....	58
7.04	Land Use.....	58
7.05	Socioeconomic Resources.....	58
7.06	Visual Resources.....	59
7.07	Recreational Resources.....	59
7.08	Historic and Archeological Resources.....	59
8.0	ALTERNATIVES TO THE PROPOSED ACTION.....	60
8.01	Introduction.....	60
8.02	Alternative of Not Building Transmission Lines.....	60
8.02.1	Use of Existing System.....	60
8.03	Transmission Line Route Alternatives.....	60
8.03.1	General Description.....	61
8.03.2	Significant Impacts of Alternative Routes.....	61
8.04	Summary of Alternative Route Comparison.....	70
8.05	Alternative Types of Towers.....	73
9.0	CONSULTATION AND COORDINATION WITH OTHERS.....	74
10.0	LIST OF PREPARERS.....	81
11.0	BIBLIOGRAPHY.....	86
Appendix A	Transmission System Planning Study Supplement	
Appendix D	Transmission Reconnaissance Study Supplement	
Appendix E	Ecological Resources Impact Study Supplement	
Appendix F	Geotechnical Impact Study Supplement	
Appendix G	Land Use Impact Study Supplement	
Appendix H	Socioeconomic Impact Study Supplement	
Appendix I	Visual-Recreation Resources Impact Study Supplement	
Appendix J	Historical-Archeological Impact Study Supplement	
Appendix K	Map Volume - All studies	

## **List of Tables & Figures**

<u>No.</u>	<u>List of Tables</u>	<u>Page</u>
	<u>Title</u>	
1.01-1	Environmental Impact Statement Documents:	
	Dickey-Lincoln School Lakes Project.....	15-16
1.05-1	Cost Estimates.....	23
2.06-1	Aquatic Habitat Values.....	27
2.06-2	Location of Floodplain Areas Crossed by Proposed Route.....	28
2.08-1	Terrestrial Habitat Ratings.....	30
2.09-1	Towns/Socioeconomic Regions Traversed by Proposed Route.....	31
2.09-2	Social and Economic Base Data by Region and Subregion.....	32
2.13-1	Visual Landscape Quality Summary.....	36
2.13-2	Visual Site Attractiveness Summary.....	36
2.13-3	Visually Sensitive Land Uses.....	37
3.06-1	Aquatic Ecosystem Impact Summary.....	42
3.08-1	Disturbance Probability.....	43
3.09-1	Regional Summary of Socioeconomic Impacts.....	45
3.09-2	Socioeconomic Impacts by Link.....	46
3.12-1	Recreation Impacts.....	47
3.13-1	Visual Impacts.....	49
8.03-1	Preferences for Link Options.....	62
8.03-2	Alternative Routes/Links - Segment F.....	63
8.03-3	Alternative Route Impact Rankings - Segment F.....	64
8.04-1	Relative Impact Rank Score.....	71

# List of Figures

<u>No.</u>		<u>After Page</u>
1.03-1	Facility Locations.....	19
1.03-2	Sketch of Existing Facilities and Right-of-Way and Proposed Facilities.....	20
1.03-3	345 kV Double-Circuit Transmission Tower.....	21
1.03-4	345 kV Single-Circuit Transmission Structure.....	21
2.09-1	Socioeconomic Political Structure/Regional Divisions.....	31
8.03-1	Facility Locations.....	61
8.03-2	Alternative Route Diagram.....	64

## **Preface**

## PREFACE

This draft EIS Supplement describes the environmental impacts of updated transmission plans of the Department of Energy (DOE) for the proposed Dickey-Lincoln School Lakes Project. Energy produced by the project is to be integrated into the New England electric system if the project is constructed.

A draft EIS for the project, including the dams, powerhouses, reservoirs, dikes, etc., has been completed by the U.S. Army Corps of Engineers and filed with the Environmental Protection Agency (EPA). DOE has completed a draft EIS on the transmission facilities and filed it with the EPA in April 1978. The Corps' draft statement and the DOE draft will be combined into a single, joint final EIS for the project and the associated transmission facilities. The final EIS is to be filed with EPA in August 1980. The Corps' draft EIS is supported by 10 appendices. Copies of the Corps' draft and its appendices have been distributed throughout the six New England states and may be read at designated repositories.

Copies of this draft EIS supplement for a portion of the transmission facilities associated with the project, together with its 9 appendices, have been placed in the same repositories as well as in repositories in several other communities where the impacts are of interest. These places include:

### REPOSITORIES

#### Connecticut

Hartford  
Storrs

State Library  
University of Connecticut

#### Maine

Allagash  
Ashland  
Auburn  
Augusta  
Augusta  
Bangor

Town Hall  
Town Council  
Androscoggin Regional Planning Commission  
Natural Resources Council  
State House Law and Legislative Library  
Department of Energy - Federal Office  
Building

Bangor  
Bangor  
Biddeford  
Brunswick  
Caribou  
Castine

Penobscot Valley Regional Planning Commission  
Public Library  
McArthur Public Library  
Bowdoin College - Longfellow Library  
Northern Maine Regional Planning Commission  
Maine Maritime Academy - Nutting Memorial  
Library

Farmington  
Fort Kent  
Fort Kent  
Jackman  
Lewiston  
Machias  
Madawaska

University of Maine  
Chamber of Commerce  
University of Maine  
Town Hall  
Bates College  
University of Maine - Merrill Library  
First Selectman

Orono	University of Maine - Raymond H. Fogle Library
Portland	Portland Public Library
Portland	University of Maine - Documents Department
Portland	University of Maine - Law Library
Portland	University of Maine - Acquisitions Librarian
Portland	University of Maine - Center of Research - Advanced Study
Presque Isle	University of Maine
Springvale	Nasson College - Anderson Learning Center Library
St. Francis	First Selectman
Unity	Unity College
Waterville	Colby College - Miller Library
Waterville	Public Library
Winslow	North Kennebec Regional Planning Commission

#### Massachusetts

Amherst	University of Massachusetts
Boston	Boston Public Library
Boston	Department of Energy
Boston	State Library - Fingold Library
Cambridge	Harvard Graduate School of Design - Gund Hall
Cambridge	Harvard - Widener Library
Cambridge	Massachusetts Institute of Technology
Chestnut Hill	Boston College - Babst Library
Lowell	University of Lowell - Alumni Memorial Library
Waltham	Brandeis University - Goldfarb Library
Waltham	U.S. Army Corps of Engineers
Worcester	Worcester Polytechnical Institute - Gordon Library

#### New Hampshire

Bow	Central New Hampshire Regional Planning Commission
Concord	State Library
Durham	University of New Hampshire - Ezekiel W. Dimond Library
Franklin	Public Library
Franconia	North Country Council
Groveton	Public Library
Hanover	Dartmouth College - Baker Library
Hudson	Hills Memorial Library
Laconia	White Mountain National Forest
Laconia	City Library
Littleton	City Library
Manchester	City Library
Meredith	Lakes Region Planning Committee
Plymouth	Plymouth State College

Rhode Island

Kingston  
Providence  
Providence

University of Rhode Island  
Brown University  
State Library

Vermont

Burlington  
  
Essex Junction  
  
Montpelier  
Montpelier  
South Royalton  
St. Johnsbury  
St. Johnsbury

University of Vermont -  
Guy W. Bailey Memorial Library  
Chittenden County Regional Planning  
Commission  
State Library  
Vermont Free Library  
Vermont Law School  
Northeast Vermont Development Association  
St. Johnsbury Athenaeum

Individual appendices for this environmental impact statement are available in limited quantities. They may be obtained by written request to:

Timothy J. Murray  
Department of Energy  
Bonneville Power Administration, ETMC  
P. O. Box 3621  
Portland, Oregon 97208

## **Section 1**

### **Description of the Proposal**

## 1.0

## DESCRIPTION OF THE PROPOSAL

### 1.01

### Introduction

The Department of Energy (DOE), as a cooperating agency with the U.S. Army Corps of Engineers, is responsible for the engineering, environmental, and economic studies for alternative transmission plans for the proposed Dickey-Lincoln School Lakes hydroelectric project in northern Maine.

DOE filed a draft Environmental Impact Statement (EIS) with the Environmental Protection Agency (EPA) on April 1, 1978, held three series of public meetings in the region, received comments, and made appropriate changes in the draft EIS. A summary of material in the DOE studies was included by the U.S. Army Corps of Engineers in the final project EIS. That EIS was to be filed with EPA in the fall of 1978. (See Table 1.01-1 for a complete list of documents prepared by both the Department of Energy and the U.S. Army Corps of Engineers.) Circumstances related to fish and wildlife mitigation planning for the project changed the scheduled filing date to August 1980. Construction of the project could then start in FY 1983.

This construction delay necessitated a DOE review of the adequacy of previous power system planning studies which identified the proposed "plan of service." That plan was chosen in 1977, based on studies and system assumptions (loads, resources, and transmission system) current for the region in 1974. Since then, load estimates have substantially decreased and generation assumptions have changed. Additional load flow studies have been made by DOE and NEPLAN in 1979 and 1980 to verify the plan-of-service decision. These studies use system assumptions for load and generation that are consistent with current regional forecasts.

These studies have demonstrated that a change in the transmission plan-of-service is necessary. The change consists of the addition of a 345-kV transmission line from the Moore Substation near Littleton, New Hampshire, to the Webster Substation near Franklin, New Hampshire, in lieu of the 345-kV line in the previous plan from Granite Substation near Montpelier, Vermont, to Essex Substation near Burlington, Vermont.

This draft EIS Supplement was prepared by the DOE to discuss the impacts of and alternatives to the above plan of service addition and change. Granite-Essex line impacts will not occur because that line segment will not be built. The changed plan of service will probably decrease substantially the total environmental impact from the transmission facilities because an already cleared right-of-way will be used for over 90 percent of the new transmission route. Transmission impacts for the entire Dickey-Lincoln School integration project are adequately treated in the April 1978 draft EIS. That document is referenced where appropriate. This document has been filed with the EPA as a Supplement to the Final EIS prepared by the U.S. Army Corps of Engineers.

TABLE 1.01-1 - ENVIRONMENTAL IMPACT STATEMENT DOCUMENTS  
DICKEY-LINCOLN SCHOOL LAKES PROJECT

U.S. Department of Energy

Draft Supplement Environmental Impact Study - Transmission Line	-DOE, 1980
Appendix A      Transmission Planning System Supplement	-DOE, 1980
Appendix D      Transmission Reconnaissance Study Supplement	-DOE, 1980
Appendix E      Ecological Resources Impact Study Supplement	-DOE, 1980
Appendix F      Geotechnical Impact Study Supplement	-DOE, 1980
Appendix G      Land Use Impact Study Supplement	-DOE, 1980
Appendix H      Socioeconomic Impact Study Supplement	-DOE, 1980
Appendix I      Visual-Recreation Resources Impact Study Supplement	-DOE, 1980
Appendix J      Historical-Archeological Impact Study Supplement	-DOE, 1980
Appendix K      Map Volume Supplement	-DOE, 1980

U.S. Army Corps of Engineers

Draft Supplement Environmental Impact Statement	- CE, 1980
Appendix K      Fish and Wildlife Mitigation Plan	- CE, 1980
Appendix C      Supplement No. 2	- CE, 1980
Appendix J      Supplement No. 2	- CE, 1980
Fish and Wildlife Mitigation Report with Attachments 1, 2, 3	- CE, 1980

U.S. Army Corps of Engineers

Revised Draft Environmental Impact Statement	- CE, 1978
Volume 1 - Summary Document	
Volume 2 - Comment and Response	
Volume 3 - Comments Received on Draft EIS	
Appendix C      Supplement	- CE, 1978
Appendix E      Supplement	- CE, 1978
Appendix F      Supplement	- CE, 1978
Appendix G      Revised	- CE, 1978
Appendix I      Supplement	- CE, 1978
Appendix J      Supplement	- CE, 1978
Addenda and Errata	- CE, 1978
Supplement to Draft EIS for Transmission	-DOE, 1978
Lines prepared by the Department of Energy	

U.S. Department of Energy

Draft Environmental Impact Study-Transmission Line	-DOE, 1978
Appendix A      Transmission System Planning	-DOE, 1978
Appendix B      Alternative Power Transmission Corridors (4 Vol.)	-DOE, 1978
Appendix C      Transmission Planning Summary	-DOE, 1978
Appendix D      Transmission Reconnaissance Study	-DOE, 1978
Appendix E      Ecological Resources Impact Study (2 Vol.)	-DOE, 1978
Appendix F      Geotechnical Impact Study (2 Vol.)	-DOE, 1978
Appendix G      Land Use Impact Study (2 Vol.)	-DOE, 1978

Appendix H	Socioeconomic Impact Study	-DOE, 1978
Appendix I	Visual-Recreation Resources Impact Study (2 Vol.)	-DOE, 1978
Appendix J	Historical-Archeological Impact Study (2 Vol.)	-DOE, 1978
Facilities Location Maps		-DOE, 1978
Errata Sheets		-DOE, 1978

#### U.S. Army Corps of Engineers

Draft Environmental Impact Statement-Corps of Engineers		- CE, 1977
Appendix A	Geology and Seismology	- CE, 1977
Appendix B	Climate and Atmosphere	- CE, 1977
Appendix C	Social and Economic Assessment	- CE, 1977
Appendix D	Cultural Resources Management	- CE, 1977
Appendix E	Aquatic Ecosystem and Fisheries Studies	- CE, 1977
Appendix F	Terrestrial Ecosystems Analysis	- CE, 1977
Appendix G	Recreation Resources	- CE, 1977
Appendix H	Noise Impact Assessment	- CE, 1977
Appendix I	Alternatives Study	- CE, 1977
Appendix J	Coordination With Other Agencies and Public Involvement	- CE, 1977
Design Memorandum No. 2	Hydrology and Hydraulic Analysis Sections I & II	- CE, 1977
Design Memorandum No. 3	Hydropower Capacity and Project Economics	- CE, 1977
Design Memorandum No. 4A	General Design (Revised) (Vol. I & II)	- CE, 1977
Design Memorandum No. 5	Water Quality	- CE, 1977

#### 1.01.1 Description of the Dickey-Lincoln School Lakes Project

The main purpose of the Dickey-Lincoln School Lakes Project is to generate electricity to help meet future needs of New England consumers. The project, located in northern Aroostook County, Maine, on the St. John River near the Canadian border, would be financed by the Federal Government.

The power plant at Dickey would be capable of generating approximately 1,183 million kilowatt hours (1183 GWH) of electricity annually. Dickey Dam would be operated principally as a peaking plant, designed to operate at high capacity for short periods of time to meet critical daily peak loads. The power would be melded into the load resource curves of the New England Power Pool system to attain maximum project benefits. In operation, Dickey Dam would release large surges of water through the turbines in relatively short periods of time. Lincoln School Dam, located downstream, would impound and smooth out these releases, reregulating the river. Lincoln School Dam would also generate about 262 GWH of electric power annually.

The flood control potential of the Dickey-Lincoln School Lakes project would also reduce extensive flood damage to Maine and New Brunswick communities.

Planning studies for the project have addressed two levels of development: (1) an authorized installed capacity of 760 MW at Dickey and 70 MW at Lincoln School for a total nameplate capacity of 830 MW; (2) an ultimate development with an additional 380 MW of pumped-storage capacity at Dickey Dam. Further authorization by Congress is required for this additional capacity. The ultimate development would increase the nameplate rating at Dickey to 1,140 MW and the project total to 1,210 MW.

#### 1.02 Study Methodology

This supplemental study, analysis, and report was done using methodology identical to that of the April 1978 EIS. It is a three-phase study: (1) power system planning studies; (2) a review of the corridor identification based on the 1977 VTN Corridor Assessment Study of the entire 32,000 square mile study area; and (3) route identification and impact studies. For consistency, DOE made similar study arrangements with representatives of NEPOOL and of New England region utilities for the additional "Plan of Service" studies. DOE also re-engaged for supplementary route studies the same New England environmental contractors used in the original study. This provided a high degree of continuity and consistency of analysis procedures between studies. The original VTN Corridor Assessment included geographic areas considered as possible locations for the new line to Webster. It contained adequate information to identify corridors and routes for this new study.

##### 1.02.1 Phase 1 - System Planning Studies

The purpose of the system planning study update, fully documented in Appendix A to this Supplement, was to review transmission requirements for Dickey-Lincoln School based on the New England Power Pool (NEPOOL) utilities'

1979 projections of loads, resources, and transmission facilities for New England. The revised energization date for Dickey-Lincoln School is now 1991 for the authorized level of development. Nuclear units in Maine and Vermont, included in the resource data for the earlier transmission system planning studies, are not included in the 1979 NEPOOL resource data.

Preliminary power flow studies were performed by DOE and NEPOOL in May 1979. The latest load and resource data for the region indicated that our previously proposed transmission system, Plan E, would not be adequate for the integration of Dickey-Lincoln School power into the New England electric system with these new assumptions. The New England transmission system anticipated to be "in place" by the time the Dickey-Lincoln School Lakes Project is energized has changed primarily because a nuclear generating plant in western Vermont and two nuclear plants in southeastern Maine have not been built. The Comerford-Webster and Comerford-Beebe plans appear to be better overall for the Dickey-Lincoln project and for New England than Plan E because of their greater flexibility and potential long-term uses. These two plans provide transmission reinforcement toward major load centers from which there is the flexibility of developing 345-kV transmission to the south, east, or west. The most efficient integration of generation from the Dickey-Lincoln School Lakes project into the New England system can be accomplished through the extension from Moore-Comerford to Webster.

(See original DOE draft EIS, especially Appendix C, which discusses the reasons for the selected and alternative plans of service for the overall study, and Appendix B, which discusses all transmission corridors that have been carefully examined, and the reasoning behind the corridor proposal.)

The studies required in the evaluation of the alternative transmission plans have been completed. They were made for 1990-91 winter conditions with heavy load (90 percent of winter peak) and light load (45 percent of winter peak with one Dickey unit pumping); and for 1991 summer conditions with heavy load (90 percent of summer peak) and intermediate load (60 percent of summer peak). Heavy power transfers from north to south with Dickey units generating at full output occur with the summer intermediate load.

Study results demonstrated that the Comerford-Webster transmission plan would adequately integrate the Dickey-Lincoln School project into the New England system. (For more detail, see Appendix A to this Supplement.)

#### 1.02.2 Phase II - Corridor Assessment and Plan of Service Proposal

Given the information from the transmission system planning study, DOE reviewed the Alternative Power Transmission Corridor study (Appendix B to the original draft transmission EIS) and determined that corridors had been defined for the new additional facilities required in the new plan of service. That information served as a basis for detailed route identification studies.

### 1.02.3 Phase III - Route Identification and Evaluation

This phase was conducted by DOE location engineers and by several New England-based environmental consultants. This phase identified in more detail route locations within the previously defined corridors and the impact of these alternative routes. The data necessary for this supplemental draft EIS was also gathered.

#### 1.02.3.1 Route Identification Studies

Experienced engineers from DOE performed the Reconnaissance Study (Appendix D to this Supplement). This effort included reviewing the previously established corridors and locating alternative one-half-mile-wide transmission line routes within the corridors.

#### 1.02.3.2 Route Impact Studies

Six studies completed by contract are as follows:

<u>Study</u>	<u>Contractor</u>
Geotechnical Impact	E. C. Jordan Co., Portland, Maine
Socioeconomic Impact	E. C. Jordan Co., Portland, Maine
Land Use	E. C. Jordan Co., Portland, Maine
Ecological Resources	Center for Natural Areas, South Gardiner, Maine
Cultural Resources	Public Archeology Facility, State University of New York, Binghamton, New York
Visual-Recreational Resources	Comitta Frederick Associates, West Chester, Pennsylvania

Information resulting from these studies appears in sections of this supplement. Individual study reports are included as appendices to this document.

#### 1.02.3.3 Route Evaluation

Upon completion of reconnaissance and environmental impact studies, DOE held an interdisciplinary evaluation session with the study contractors. In this session, alternative routes were compared with respect to their impacts. Rankings of the alternative routes for each impact assessment topic are included in section 8. The proposed route is considered to have the least overall environmental impact.

### 1.03 Description of Proposed Facilities

The following facilities would be required for this addition to the proposed plan. Figure 1.03-1 shows their locations.



DICKEY/LINCOLN LAKES TRANSMISSION - E.I.S. PROJECT

## FACILITY LOCATIONS

U.S. DEPARTMENT OF ENERGY - BANGOR, MAINE AUGUST 1980

### LEGEND

- Proposed Route
- Alternative Route
- \* Existing Substation
- 86 Link Number

SCALE IN MILES

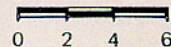


FIGURE 1.03-1

### 1.03.1 Proposed Transmission Lines

At the authorized level of development, the proposed transmission lines would include:

1. A double-circuit 345-kV transmission line on 165-foot steel towers from the Moore Substation to the Comerford Substation near Littleton, New Hampshire. This line would follow the route proposed in the original draft transmission EIS for a single-circuit 345-kV wood pole H-frame line.
2. A 345-kV wood pole H-frame transmission line from the Comerford Substation to the Webster Substation located near Franklin, New Hampshire. The proposed route for the new 345-kV line uses links 41F, 42F, 81, 83, and 86 as shown on Figure 1.03-1. The new line would be constructed within an existing transmission line right-of-way, except for the last 4.5 miles, where it would be parallel and adjacent to an existing transmission line.

The addition of this plan and this line will satisfactorily integrate the Dickey-Lincoln School generation into the New England system. The line construction on the proposed route is slightly more costly than a second-best alternative.

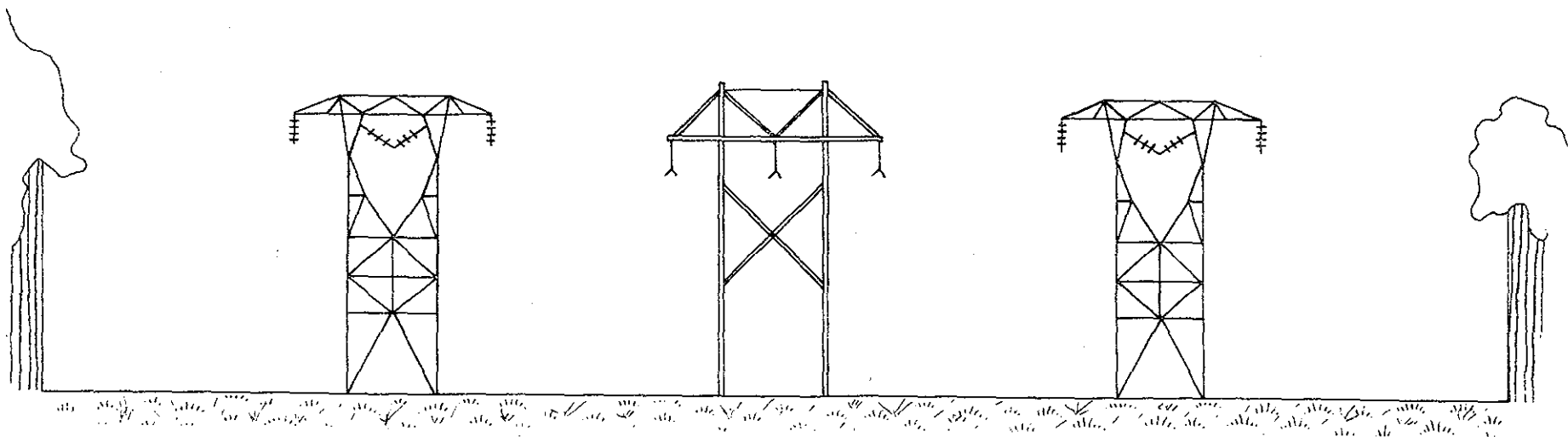
The existing right-of-way proposed for use is owned by the New England Power Company (NEP), Westborough, Massachusetts. Ultimate development of the right-of-way must be compatible with NEP's future needs. NEP does not now have a definite schedule for future additions on this right-of-way.

It is not yet known whether the Dickey-Lincoln School project will be constructed. Therefore, it would not yet be appropriate to negotiate an agreement for the line construction in this location.

NEP's representatives have not objected to including this right-of-way as an alternate in the route studies. If the Dickey-Lincoln School project is funded for construction, options to use this right-of-way for the Dickey-Lincoln School transmission requirements will be explored with NEP representatives. These options will have to be approved by NEP and must be compatible with their long-range needs. The cost of these options must also be compatible with those needs. The cost of these options would be supported by the Dickey-Lincoln School project. In the meantime, it is understood that NEP may need to develop definite plans for use of this right-of-way for their own transmission requirements.

Figure 1.03-2 shows how the proposed transmission line would be located on the existing right-of-way between NEP's steel towers.

At a point 4.5 miles west of the Webster Substation, the proposed line will leave the existing cleared right-of-way and parallel an existing 115-kV line into the Webster Substation.



SKETCH OF EXISTING STRUCTURES AND PROPOSED FACILITY WITHIN CLEARED RIGHT-OF-WAY.

FIGURE 1.03-2

### 1.03.2 Proposed Transmission Route

The proposed transmission line route was selected from various route alternatives referred to as the route network (see Figure 1.03-1). Individual route elements within the network are termed links. Each link was given a distinguishing number. The proposed transmission line route follows that combination of links considered to have least overall environmental impact. For the purpose of analysis and discussion, the term segment refers to all the alternative routes between two substations. In the original draft transmission EIS, five (5) segments were analyzed and discussed (A through E). This supplement addresses Segment F from the Moore Substation to the Webster Substation.

The proposed route, illustrated in Figure 1.03-1, consists of the following links:

Segment F Moore-Webster: 41F, 42F, 81, 83, 86  
Length: 73.8 miles

### 1.03.3 Design Criteria

Design criteria for both the double-circuit steel structures and the 345-kV wood pole system have been thoroughly discussed in the original draft transmission EIS (Section 1.3.3). That information will also apply to this facility.

Figures 1.03-3 and 4 are diagrams of the steel and wood pole towers, respectively, that would be used in the proposal.

Between the Moore and Comerford substations, the double-circuit line will require an additional 100 feet of right-of-way parallel and adjacent to the existing lines, as in the original studies. From Comerford south, the line would use the existing, cleared NEP right-of-way. A new 100-foot wide right-of-way will be needed from the point west of Webster where the proposed line will leave the already developed right-of-way and proceed to Webster Substation.

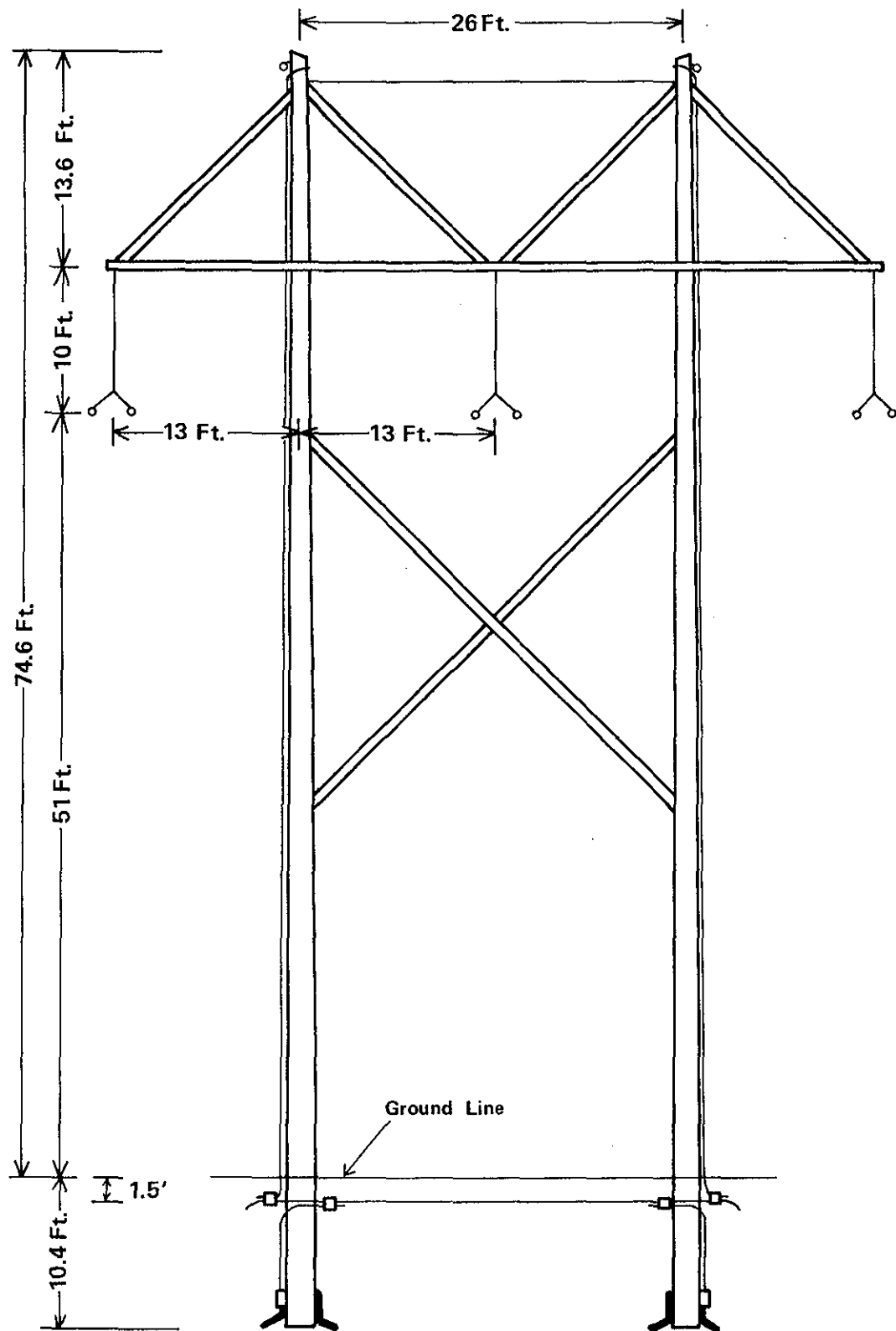
### 1.03.4 Construction Sequence

The original draft transmission EIS (section 1.03.4) discusses the construction sequence for building a transmission line. Where the right-of-way is already cleared, certain steps such as access road construction and right-of-way clearing will not be required.

### 1.03.5 Maintenance

Typical DOE maintenance and vegetation control measures are discussed in the original draft transmission EIS (Section 1.3.5). Identical measures would be used for the proposed line where DOE exercised total responsibility. However, arrangements for joint maintenance on the north-south section of the line, between Comerford and a point west of Webster, would be negotiated with the





345 KV SINGLE CIRCUIT TRANSMISSION STRUCTURE

FIGURE 1.03-4

New England Power Company at the proper time. These would typically consist of selective ground and aerial spraying and minimum development and maintenance of access roads.

#### 1.04 Construction Schedule

The proposed transmission facilities would have to be ready for energization when the first generating units in the power houses at the dams are ready for testing. Construction tentatively would begin five (5) years before generation is scheduled to begin. If the Dickey-Lincoln School Lakes Project is to begin producing power in 1991, the construction of the transmission facilities would begin in the spring of 1985.

#### 1.05 Cost Estimates

Table 1.05-1 shows the total estimated cost for transmission lines and facilities associated with the Dickey-Lincoln School Lakes Project at the authorized level (based on the original draft transmission EIS). The line between Granite and Essex substations is excluded from these estimates, as it is no longer needed.

The estimates include investment costs with interest during construction (IDC). The cost estimates are current as of November 1979. Costs for the Dickey-Lincoln School Lakes Project are discussed in Section 1.10 of the Corps' final EIS.

TABLE 1.05-1. - COST ESTIMATES - TRANSMISSION FACILITIES -  
ALL SEGMENTS (FORT KENT, ME TO WEBSTER, NH)  
(7 1/8 Percent Interest Rate)

	<u>Investment (\$000)</u>		
	<u>Materials and Construction</u>	<u>Interest During Construction</u>	<u>Total</u>
Transmission Lines	\$135,800	\$22,910	\$158,710
Substations	30,500	4,170	34,670
Power System Control	2,500	340	2,840
TOTALS	168,800	27,420	196,220

COST ESTIMATES - TRANSMISSION FACILITIES FOR MOORE-WEBSTER (SEGMENT F)  
(7 1/8 Percent Interest Rate)

	<u>Investment (\$000)</u>		
	<u>Materials and Construction</u>	<u>Interest During Construction</u>	<u>Total</u>
Transmission Lines	\$14,100	\$2,380	\$16,480
Substations	1,500	210	1,710
Power System Control	450	60	510
TOTALS	\$16,050	\$2,650	\$18,700

## **Section 2**

# **Description of the Environment Without the Proposal**

## 2.0

## DESCRIPTION OF THE ENVIRONMENT WITHOUT THE PROPOSAL

### 2.01

### Geography

The proposed route between Moore and Webster substations is 73.8 miles long. It lies entirely within New Hampshire and parallels existing transmission lines. More than 90 percent of the proposed route lies primarily within existing cleared rights-of-way. The last 4.5 miles into Webster, which will require additional right-of-way clearing, and the first 6.5 miles out of Moore, which will occupy a new right-of-way adjacent to existing facilities, are the exceptions. (This latter facility is identified and discussed in the draft EIS.)

The proposed route begins at the Moore substation adjacent to the Moore Dam and extends west to the Comerford Substation near the Comerford Dam and Reservoir. The route then turns south-southeast toward the White Mountain National Forest. Between Comerford and the National Forest, the route passes over Gardner Mountain east of Monroe. It continues toward West Bath and across the Ammonoosuc River southwest of Bath. It then passes between Pond Ledge and French Pond and continues east of Center Haverhill. Before entering the National Forest, and its Proclamation Area, the route passes east of East Haverhill and crosses Oliverian Brook. Within the National Forest and the Proclamation area, it traverses the area between Webster Slide Mountain and Mt. Mist, which lie east of the proposed route, and Lake Tarleton and Lake Armington, west of the proposed route.

Before leaving the National Forest and its Proclamation Area, the proposed route passes northeast of Ore Hill, where it crosses the Appalachian Trail, and east of Sentinel Mountain. South of the National Forest the route runs near the Baker River, west of Wentworth and of the Villages of Rumney and Rumney Depot. After crossing Bailey Hill, the route continues south-southeast and passes east of North Groton and west of Hebron and Alexandria. In the seven-mile stretch from Hebron to Alexandria, the proposed route passes west of Newfound Lake, the largest lake near the proposed route. The route then passes South Alexandria and over Murray Hill, before passing west of Highland Lake and over Boston Hill in the town of Andover. At Boston Hill, the proposed route runs south of Webster Lake and east of Franklin.

### 2.02

### Geology

The northern portion of the proposed route crosses the western section of the White Mountain National Forest. The route is located in the Appalachian Highland Province of New Hampshire. Local relief ranges from 400 to nearly 1,400 feet with a maximum elevation of 2,100 feet at Sentinel Mountain. The area is underlain by sedimentary and volcanic Paleozoic rocks, the deeply-eroded core of an ancient mountain system. These metamorphosed rocks have been faulted and folded and intruded by igneous bodies. The general strike of the rock is north-northeast, swinging to northeast, north of latitude 44 degrees. The Bronson Hill Anticline is the dominant structural feature of this general area. The Paleozoic rocks have been intruded by three distinct plutonic series: the White Mountain Plutonic - Volcanic Series; the New Hampshire Plutonic Series; and the Oliverian (dome-forming) Plutonic Series.

A more detailed discussion of geology, soils, and mineral and aggregate deposits is found in the Geotechnical Impact Study, Appendix F to this Supplement.

## 2.03                Soils

Most of the soils along the proposed route have formed in glacial till. The specific soil characteristics vary according to the area's elevation and topography. In the lower elevations common to the portion of the route from the Connecticut River to the boundaries of the White Mountain National Forest at Easton, Benton, and Warren, the glacial till soils belong to the Berkshire-Peru-Marlow association. They are primarily sandy but range from gravelly to silty and are mostly well-drained and moderately well-drained. Berkshire-Lyman association soils are found on the high ridges and steep slopes of this area. They have characteristics similar to those of the Berkshire-Peru-Marlow association except that they are shallow to bedrock; bedrock exposures are common. Most soils of these two associations have low erodibility.

Among the White Mountains, the glacial till soils are generally sandier, better drained, and less developed than the soils of the northern sections of the proposed route. Along the highest elevations and steeper slopes the soils belong to the Hermon-Canaan association. They are somewhat excessively drained. Bedrock is usually found within two feet of the surface and exposed bedrock is very common. The soil erodibility is low but the steep slopes of the area result in a high erosion potential. Soils of the Herman-Becket-Canaan association are found on the lower slopes and rounded hills in this area. They are generally sandy, well-drained, and of low erodibility.

In the southern section of the proposed route, near Highland and Webster Lakes, the glacial till soils belong to the Payton-Shapleigh-Woodbridge association. They are well to moderately well-drained and commonly have distinct fragipan. Depressional areas are wet and swampy areas are common. Textures range from silty to sandy and soil erodibility is moderate.

Terraces and flood plains are evident along most streams and rivers crossed by the proposed route. Along the upper reaches of these streams the soils are generally sandy to gravelly. They are usually excessively drained and are often mined for gravel. The largest deposits of these soils in the study area are located along the upper reaches of the Baker River. Soil erodibility is low.

## 2.04                Mineral and Aggregate Deposits

There are no known exploration programs concentrating on the area traversed by the proposed transmission lines. However, mineral exploration effort has been expanded considerably in the Northern Appalachian region in recent years, especially for massive sulfide deposits and uranium. It is reasonable to assume that the escalating price of gold and silver may cause renewed interest in prospects and deposits previously considered uneconomical.

Along the proposed route, a number of copper prospects and/or mines are found to the south of link 42F. Copper and lead prospects are found adjacent to link 81, in addition to quartz, soapstone, an active traprock quarry, and an abandoned limestone quarry. A massive metamorphosed sulfide deposit at Ore Hill, west of link 83, has produced copper, lead, and zinc. From link 83 south, a number of old mica-feldspar-beryl prospects and/or mines are found. Aggregate sources are found along all links of the proposed route.

## 2.05 Climate and Air Quality

The transmission draft EIS contains a general discussion of climate and air quality in the study region--Maine, New Hampshire, and Vermont. That discussion of general climatic conditions such as temperature, precipitation, winds, storms, and floods pertains to the Moore-Webster Segment of the transmission system. Wind and ice loading are two climatic factors which exert forces upon the transmission towers and conductors. These factors are addressed in the design of the facilities in accordance with the National Electric Safety Code (NESC) of the American National Standard.

## 2.06 Surface Water

Surface water resources are summarized below. Also see the Ecological Resources Impact Study, Appendix E to this Supplement.

### 2.06.1 Aquatic Resources Inventory

Aquatic resources were inventoried in the Ecological Resources Impact Study, Appendix E to this Supplement. Aquatic resources are categorized as: streams, wetlands, and lakes. Streams include rivers and brooks. Wetlands are distinguished by the dominant form of vegetation and classed as bogs, marshes, or swamps. Lakes, as defined, include both ponds and lakes.

### 2.06.2 Inventory of Water Features

Water features inventoried for this study are listed in the Ecological Impact Study, Appendix E to this Supplement. Significant water features are discussed in the following section.

### 2.06.3 Aquatic Resource Ecological Values

Aquatic habitat values for the proposed route are listed in Table 2.06-1. The values in the table are representative of the following streams, lakes and wetlands. In the northern portion of the proposed route, aquatic resources include: French Pond, a 31-acre lake which supports a warmwater fishery of smallmouth bass, yellow perch, horned pout, and golden shiner; the Ammonoosuc River, a poor-to-fair fishery stocked annually with brook trout, brown trout, and rainbow trout; Childs Brook, a fair trout fishery; Oliverian Brook, stocked annually with brook trout; Clark Brook, stocked with brook trout; and Ore Hill Brook, a poor trout fishery. Highland Lake is a low-to-moderately productive 200-acre pond with a heavily developed shoreline. It supports both coldwater and warmwater fisheries and is stocked with smallmouth bass, brook

trout, and rainbow trout. Webster Lake is a moderately productive 61.2-acre lake which supports a fair warmwater fishery and is not stocked. Excellent trout fisheries are present in Cockermouth River, Smith River, Halls Brook, Hardy Brook, Fowler River, and Patten Brook. All these streams except Hardy Brook are stocked with brook trout. The Smith River is also stocked with rainbow trout, and the Cockermouth River supports a salmon fishery. Wetlands near South Alexandria are considered by the New Hampshire Fish and Game Department to be good-to-excellent habitat for waterfowl.

TABLE 2.06-1. AQUATIC HABITAT VALUES 1/ PROPOSED ROUTE: MOORE-WEBSTER

Habitat	Value				
	1 (Low)	2	3 (Moderate)	4	5 (High)
Streams (No.)	46	9	6	6	5
Lakes (No.)	1	--	--	1	1
Wetlands (No.)	12	5	5	1	--

1/ Reference: Ecological Resources Impact Study, Appendix E to this Supplement.

#### 2.06.4 Water Quality

All lakes, ponds, streams and rivers along the proposed route are Class B, according to the water quality classification system of the State of New Hampshire. The classification does not necessarily represent existing water quality. Rather, it reflects goals for water quality in the classified body of water. The recommended-use classification is:

Class B: Acceptable for bathing and recreation, fish habitat, and public water supply after adequate treatment; no disposal of sewage or wastes unless adequately treated.

#### 2.06.5 Floodplains and Wetlands

Information on 100-year floodplains was obtained from Flood Hazard Boundary Maps prepared by the Department of Housing and Urban Development along with Flood Insurance Rate Maps for the City of Franklin. This information indicates that the proposed route crosses about 14 floodplain areas. The longest floodplain area crossed is approximately 1,200 feet; the total length of floodplain crossed is 6,450 feet. Table 2.06-2 indicates the location of the floodplains by link and mile number. The proposed facility will also cross 13 wetland areas.

TABLE 2.06-2. - LOCATION OF FLOODPLAIN AREAS CROSSED BY PROPOSED ROUTE

<u>Link</u>	<u>Mile</u>
42	2
81	8, 11, 16, 16, 17, 20
83	7, 9, 11
86	7, 17, 25, 30

## 2.07 Vegetative Communities

## 2.07.1 Plant Communities

The following cover types were inventoried within one-quarter mile of the proposed route.

<u>Community Types</u>	<u>Designation</u>	<u>Community Types</u>	<u>Designation</u>
Spruce-Fir Mature	SWM	Regenerating (RGN)	SWR, MR, PBR, HWR
Pine Hemlock Mature	PNW or PHM	Regenerating Abandoned Cultivated Field	RAF
Pine-Hemlock Regenerating Cedar	PNR CS	Row Crops Wetlands	F BG, M, SP, OW
Softwood-Hardwood Mature	SHM	Open Water	OW
Hardwood-Softwood Mature	HSM	Existing Right- of-way	ERW
Poplar-Birch Mature	PBM	Man-Made	MM
N. Hardwoods Mature	HWM		

### Cover Types:

SWM: Spruce-fir mature  
PNM: Pine-hemlock mature  
PNR: Pine regenerating  
CS: Cedar swamp  
SHM: Mixed mature with softwoods predominating  
HSM: Mixed mature with hardwoods predominating  
PBM: Poplar-birch mature  
HWM: Hardwood mature  
RGN: Forest regeneration  
RAF: Regenerating agricultural fields  
F: Row crop fields  
AF: Other fields  
W: Wetlands (excluding open water and unvegetated shoreline)  
OW: Open Water (including unvegetated shoreline)  
MM: Man-made Features (buildings, gravel pits, garbage dumps, etc.)

The total acreage within the route and the lineal mileage of each community type is listed in the Ecological Resources Impact Study (Appendix E to this Supplement).

Mature softwood forests and mixed mature softwood forests are the predominant vegetative cover types along links 41F, 42F and 81 in the northern portion of the proposed route. Mature hardwoods are a secondary cover type. In addition, there are some row crops. Mature hardwood forests consisting of eleven (11) different cover types predominate along links 83 and 86, in the central and southern portions of the proposed route.

#### 2.07.2 Rare, Threatened or Endangered Plant Species

The potential for encountering rare, threatened, or endangered plant species was evaluated, using two procedures. The first recognizes that certain conditions of soils, slope, orientation, and exposure make the occurrence of a rare plant species or an assemblage of many uncommon species much more probable. The second was an inventory, along the proposed route, of numerous ledges potentially valuable to rare plants. Eleven miles of ledge habitats with rare plant potential are crossed by the proposed route right-of-way. (See pp. 3-25 and 3-26, Appendix E to DOE 1978 EIS for list of potential rare plants native to cliffs.)

#### 2.08 Wildlife

A general discussion of wildlife resources along the proposed route is presented below. Also see the Ecological Resources Impact Study, Appendix E to this Supplement.

##### 2.08.1 Wildlife Values

The value of habitats encountered is described below for the proposed route. Values ranging from high to low reflect the relative value of these habitats for "species of special concern," for "harvested species," and for "all

species." Total miles of the proposed route crossing various species habitats are listed in Table 2.08-1, by habitat value. Habitat values for "species of special concern" and "all species" are very high along link 41F, and average for "harvested species" (game). Link 42F values are average for all three species categories; however, deer are present in very high numbers throughout the northern portion of the proposed route and bear are present in moderate numbers. Habitat values along the remaining links of the proposed route are below average for "species of special concern" and "all species," and average for "game species." Bear harvests are relatively high in the towns of Haverhill, Warren, and Monroe along link 81; in Wentworth and Warren along Link 83; and in Groton and Hebron along link 86. Numbers of deer are high along link 81, an area noted for some of the better hunting within the White Mountain National Forest. There is a reintroduction site for the peregrine falcon near link 81, but outside the route. However, the centerline of link 81 intersects some wetlands currently being considered by the U.S. Fish and Wildlife Service as potential "critical habitat" for the peregrine falcon. Five vulnerable habitat fragments occur along the link 83 right-of-way, and six fragments occur adjacent to the link 86 right-of-way. In the southern portion of the proposed route, deer harvests are low in the towns of Alexandria, Groton, and Hill; they are moderate in the towns of Andover and Hebron.

TABLE 2.08.1 - TERRESTRIAL HABITAT RATINGS 1/ PROPOSED ROUTE: MOORE-WEBSTER

Habitat	Value				
	1 (Low)	2	3 (Moderate)	4	5 (High)
Species of Special Concern: (Miles)	14.3	37.2	19.0	3.0	0.3
(Percent)	19	50	26	4	1
Harvested (Game) Species: (Miles)	3.0	17.5	46.3	5.0	2.0
(Percent)	4	24	62	7	3
All Species: (Miles)	3.0	37.5	32.0	5.3	1.0
(Percent)	4	44	43	7	2

#### 2.08.2 Rare, Threatened or Endangered Wildlife Species

The peregrine falcon, a threatened species, is discussed above. A possible nesting site of the Coopers hawk, a "species of special concern," was also noted within the southern part of link 81.

#### 2.09 Socioeconomics

For purposes of analysis, the municipality or town, rather than the half-mile-wide route, was studied. Two regional groupings (region VI and VII) were developed in the original draft EIS to reflect municipalities with similar

socioeconomic characteristics; and three subregions were designated within these to acknowledge more unique characteristics of specific towns or groups of towns. These divisions are used here. (Table 2.09-1 and Figure 2.09-1: Socioeconomic Political Structure/Regional Divisions.)

TABLE 2.09-1. - TOWNS AND SOCIOECONOMIC SUBREGIONS CROSSED  
BY PROPOSED ROUTE: MOORE-WEBSTER

<u>Socioeconomic Subregions</u>			
<u>VI-A</u>	<u>VI-B</u>	<u>VI-C</u>	<u>VII</u>
Monroe	Benton	Groton	Hill
Littleton	Warren	Hebron	Andover
Bath	Wentworth	Alexandria	Franklin
Haverhill	Rumney		
Lyman			

Region VI, North Central New Hampshire, is dominated by the White Mountains. The area is composed of small, rural communities with Littleton (population 5,200) and Plymouth (population 4,400) forming the two largest towns. The region is characterized by extensive forest cover, the White Mountain National Forest, cultivated areas above the Connecticut River, and a limited economic base dominated by seasonal tourism. It is subdivided into three subregions centered around Littleton, North Woodstock, and Plymouth.

Region VII consists of three communities in the Central Lakes Region, an area which grew significantly in the late sixties and early seventies. Franklin is a densely populated manufacturing community, while the two outlying communities, Hill and Andover, are rural, forested, and characteristically changing to bedroom communities as greater job opportunities occur in Franklin and Laconia.

Existing Socioeconomic conditions are summarized in Table 2.09-2. Also see the Socioeconomic Impact Study, Appendix H to this Supplement.

## 2.10 Existing Land Use

Land uses were identified in a half-mile-wide corridor along 73.8 miles of the proposed route. The proposed route is different from other segments of the Dickey-Lincoln School system because it is much more developed. Nevertheless, the area would be considered quite rural as compared to most of the northeast. It is frequently used as a vacation area and outdoor recreation resource.

Of over 260 residences inventoried within a one-half-mile-wide route, approximately 23 are seasonal residences. Other significant land uses within this route include 1,640 acres of agricultural land, 123 acres of mining, and over 16,000 acres of forest land. Recreational uses are highlighted by the White Mountain National Forest. Campgrounds and municipal and state parks encompass a significant area. Also see the Visual-Recreation Resources Impact Study, Appendix I to this Supplement.

TABLE 2.09.2. - SOCIAL AND ECONOMIC BASE DATA FOR REGIONS VI AND VII

Subregion	Population Density People Square Mile	Commercial Center 1/	Population of Commercial Center	Past Growth Rate	Projected Growth Rate	Temporary Housing Supply 2/	Emphasis on Local Planning 3/	Access to Population Centers 4/
VI-A	38.4	Littleton	5,000	Fluctuating	Stable	Numerous	Moderate	Moderate
VI-B	12.0	Plymouth	4,300	Moderate	Moderate	Numerous	High	Moderate
VI-C	26.7	Plymouth	4,300	Moderate	Moderate	Numerous	High	Moderate
VII	76.8	Franklin	7,500	Moderate	Stable	Numerous	Moderate	Moderate Tourism

Subregion	Labor Force 5/	Economic Growth 6/	Median Family Income 7/	Tax Base 8/	Land Ownership Pattern
VI-A	9,502	Slow	\$8,080	Residential Yield	Residential Agriculture
VI-B	5,000	Slow	9,066	Residential	Government, Residential
VI-C	5,000	Slow	9,765	Residential Industrial	Residential, Commercial
VII	10,000	Moderate	9,526	Residential Industrial	Residential, Commercial

Subregion	Labor Force 5/	Economic Growth 6/	Median Family Income 7/	Tax Base 8/	Land Ownership Pattern
VI-A	9,502	Slow	\$8,080	Residential Yield	Residential Agriculture
VI-B	5,000	Slow	9,066	Residential	Government, Residential
VI-C	5,000	Slow	9,765	Residential Industrial	Residential Commercial
VII	10,000	Moderate	9,526	Residential Industrial	Residential Commercial

LEGEND: Sources are indicated in text. Unless otherwise noted, rankings reflect regional rates.

1/ The principal commercial center serving the subregion.

2/ Based on probable demand placed on the area by the construction process labor force. "Numerous" means enough facilities for the workers to choose from.

3/ Based on: 1) existence of town plans and/or zoning ordinances; and 2) effectiveness in using plans.

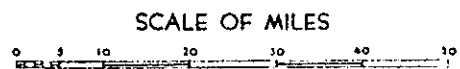
4/ Based on distance to population centers, the size of the center, extent of services available.

5/ Where local labor force figures are unavailable, state labor participation rates were used.

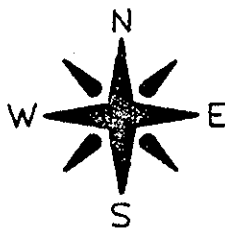
6/ Based on state averages "slow" indicates growth lower than state average; "moderate," similar to state average; "high," greater than state average.

7/ Based on 1970 county data. Excludes Littleton, for which the figure is \$8,620.

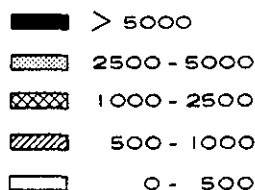
8/ Indicates the principal source of local tax revenues (based on ad valorem property tax).



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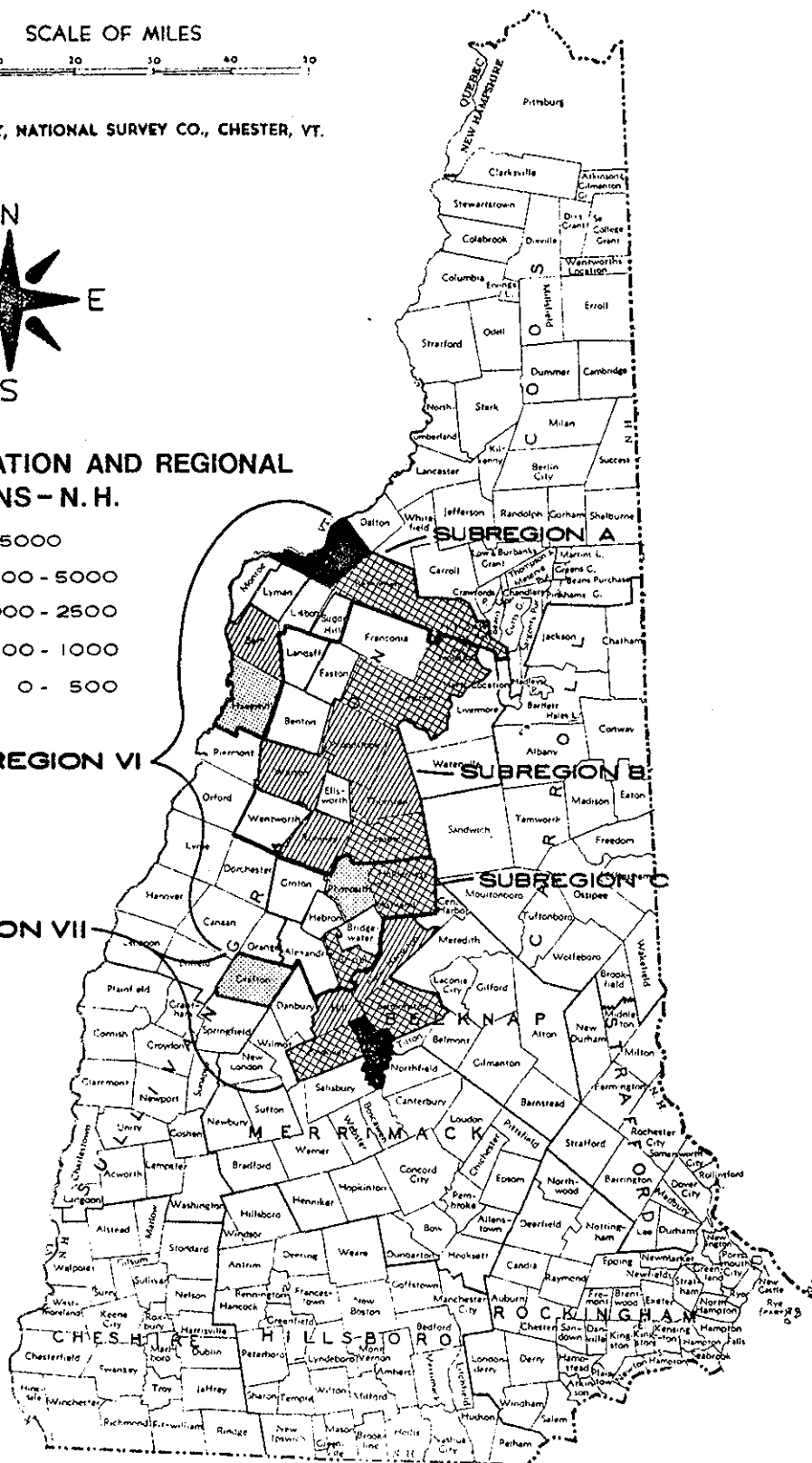


# POPULATION AND REGIONAL DIVISIONS - N. H.



REGION VI

REGION VII



Dickey/Lincoln School Lakes Transmission - E.I.S. Project  
Environmental Assessment of Alternative Routes

## 2.11 Proposed Land Use

Land use planning within the study area is conducted at three levels: state, regional, and local. The New Hampshire Office of State Planning reviews all projects that could affect State resources and acts as coordinator for regional and local planning commissions. Planning regions active within the Segment F study area include the North Country Council Inc. and the Lakes Region Planning Commission. Most towns have active planning commissions and have developed municipal plans and enacted zoning ordinances.

## 2.12 Recreation

Recreational resources are identified in Visual-Recreation Resources Study, Appendix I to this Supplement, and are mapped in Appendix K, the Map Volume. Recreational resources are numerous throughout Segment F and near the proposed route. The area is a popular tourist attraction during the summer months, offers spectacular fall foliage viewing, and has excellent facilities and winter conditions for downhill and cross-country skiing. The White Mountain National Forest is the dominant recreational feature, bordered on the north by recreational resources close to and associated with the Moore and Comerford Reservoirs and on the south by resources in the Newfound Lake-Cardigan Mountain areas.

The proposed route enters the White Mountain National Forest and its Proclamation Area just south of East Haverhill and remains within the Forest Proclamation boundary for approximately 9 miles. The Appalachian Trail (AT) and the proposed AT relocation is crossed by the route in this area. Other hiking trails, part of a larger network associated with Cardigan Mountain, are crossed in the vicinity of Newfound Lake. "Recreational" highways (classified as bicycle, sightseeing, fall-foliage, and/or scenic routes) along the proposed route include Routes 135 and 302 in the northern portion, Routes 25 and 25A in the National Forest area, and Routes 104 and 11 in the southern portion of the proposed route.

Recreational water bodies along the route include rivers and lakes, in addition to Moore and Comerford Reservoirs. Significant rivers include the Ammonoosuc River, the Baker River, the South Branch of the Baker River, and the Smith River. All these rivers are popular canoeing streams and have been designated potential State Recreational Rivers. The Ammonoosuc River is designated a potential State Scenic River. Important lakes include Newfound Lake (site of Wellington Beach State Park), Highland Lake, and Webster Lake. All these lakes are popular swimming, boating, and fishing areas. Their shores have been extensively developed with seasonal residences.

The only ski area along the proposed route is at Flag Pole Hill, south of Franklin. In addition, cross-country skiing is popular throughout the area, particularly along the numerous hiking trails.

## 2.13 Visual

Visual resources are summarized below. Also see the Visual-Recreation Resources Impact Study, Appendix I to this Supplement.

### 2.13.1 Visual Landscape Quality

Visual landscape quality describes qualitatively the view, before construction, afforded a viewer looking toward the proposed location of the transmission facility from any point within the viewshed. Impacts on visual landscape quality reflect changes to this condition.

In general, visual landscape quality within this area decreases as one moves from north to south. The proximity of the northern links to the White Mountains and Connecticut River Valley produces high visual quality. Only along part of Link 81, however, is landscape quality rated "exceptional." River townscapes and the townscapes of Bath and East Haverhill enhance the views along Link 81. Throughout the northern half of the proposed route, topographic interest is primarily high; white-water and wetland interest is low to moderate. Areas of high water/wetland interest are found in the vicinity of the Moore and Comerford Reservoirs, and near Lake Tarleton.

Further south, the amount of development tends to increase. The proposed route is located in hills adjacent to mountains, and topographic interest declines accordingly. However, the role of townscape views in enhancing visual quality increases, particularly in the vicinity of Alexandria, South Alexandria, Willow School, and East Andover. Water and wetland interest is primarily low to moderate here, but high in the vicinity of Webster and Highland Lakes.

Visual landscape quality is summarized in Table 2.13-1.

### 2.13.2 Visual Site Attractiveness

The term "visual site attractiveness" is used to express the qualities of a "near" view that one might see along the route. Views were rated for quality as very high, high, moderate, low or none. Very high site attractiveness usually occurs near surface water bodies or historic sites. Wooded areas generally have moderate site attractiveness. Where the proposed transmission facilities would be located within existing rights-of-way, a rating of "none" was usually assigned.

Visual site attractiveness along the proposed route is summarized in Table 2.13-2. Since 69.3 miles of the proposed route lies within existing rights-of-way, 94 percent of the study area is characterized as having no site attractiveness. That portion of Link 86 from Boston Hill to Webster Substation requiring right-of-way expansion has predominantly moderate site attractiveness. However, site attractiveness is rated very high within mile 30 where the proposed route crosses Chance Pond Brook.

### 2.13.3 Visually Sensitive Land Uses

Since site attractiveness and landscape quality are described for the proposed route corridor, the visually sensitive land use discussion involves the entire viewshed. Visually sensitive land uses are listed in Table 2.13-3.

The visually sensitive land uses within the viewshed of Segment F are located primarily within the river valleys crossed or paralleled by the links. Nearly all of the major communities and heavily travelled highways in the viewsheds are in these river valleys. In addition to the rivers, several large water bodies with significant shoreline development exist within the viewshed. The Connecticut and Ammonoosuc River Valleys dominate the viewsheds north of the White Mountain National Forest. Town centers within this area include: Monroe, Woodsville, Bath, and Swiftwater in New Hampshire; and Newbury, Wells River, East Ryegate, McIndoe Falls, and Barnet in Vermont. U.S. Route 302 and N.H. Route 10 are significant highways along the Ammonoosuc River Valley with an average daily traffic (ADT) greater than 3000. The Moore and Comerford Reservoirs are important water bodies at the northern end of the viewshed. South of here, the Connecticut River Valley is paralleled by Interstate 91 and U.S. 5 in Vermont (both roads with ADT's of 3000 or more). Historic sites include many widely dispersed historic homes and covered bridges at Bath, Swiftwater, and Woodsville.

The Baker River Valley dominates the proposed route viewshed adjacent to the western extension of the White Mountain National Forest. Within the river valley are N.H. Route 25 and 118, with average daily traffic (ADT) between 700 and 3,000, and the town centers of Warren, Wentworth, Rumney, and Rumney Depot. Water bodies in the area include Lakes Tarleton and Armington, and the Baker Ponds. There are numerous historic sites in the area, particularly within the villages of Rumney and Rumney Depot.

TABLE 2.13-1. - VISUAL LANDSCAPE QUALITY SUMMARY <sup>1/</sup>  
PROPOSED ROUTE: MOORE-WEBSTER

<u>Ratings</u>	<u>Miles Crossed</u>	<u>Percent</u>
Very Low	---	---
Low	3.9	5.3
Moderate	8.0	10.8
High	34.4	46.6
Very High	21.7	29.4
Exceptional	5.8	7.9

<sup>1/</sup> Reference: Visual Recreation Resources Impact Study, Appendix I to this Supplement

TABLE 2.13-2. - VISUAL SITE ATTRACTIVENESS SUMMARY <sup>1/</sup>  
PROPOSED ROUTE: MOORE-WEBSTER

<u>Ratings</u>	<u>Miles Crossed</u>	<u>Percent</u>
None	69.3	93.9
Low	0.1	0.1
Moderate	3.8	5.2
High	0.5	0.7
Very High	0.1	0.1

<sup>1/</sup> Reference: Visual Recreation Resources Impact Study, Appendix I to this Supplement.

TABLE 2.13-3. - VISUALLY SENSITIVE LAND USES <sup>1/</sup>  
PROPOSED ROUTE: MOORE-WEBSTER

	<u>Links</u>				
	<u>41F</u>	<u>42F</u>	<u>81</u>	<u>83</u>	<u>86</u>
<u>Viewshed Size</u>					
Acres:	13,650	37,990	131,580	73,300	161,300
Square Miles:	21.3	59.4	205.5	116.1	252.0
<u>Residences (Clusters)</u>					
1-5 Units:	64	184	650	347	852
6-25 Units:	2	2	25	9	37
25+ Units:	---	1	14	7	26
<u>Roads</u>					
0-750 ADT <sup>2/</sup>					
Miles:	20.0	58.0	166.8	78.5	227
Number of Crossings:	4	4	14	7	19
750-3000 ADT					
Miles:	4.2	5.7	4.4	15.5	34.2
Number of Crossings:	1	---	---	1	1
3000 + ADT					
Miles:	---	5.0	41.3	---	15.1
Number of Crossings:	---	---	1	---	---
<u>Passenger Railroads</u>					
Miles:	---	---	---	---	---
Number of Crossings:	---	---	---	---	---
<u>Historic Sites:</u>	3	9	39	22	129
<u>Transmission Lines Paralled</u>					
Miles:	0.3	6.2	24.9	12.3	30.1

<sup>1/</sup> Reference: Visual-Recreation Resources Impact Study, Appendix I to this Supplement.

<sup>2/</sup> Average Daily Traffic Volume

Visually sensitive land uses within the viewsheds south of the National Forest are dominated by development associated with Newfound Lake. Towns in the vicinity of the lake within the viewshed include Hebron and Alexandria. New Hampshire Routes 3A and 104 are significant highways serving the Newfound Lake area (ADT 750-3,000). Major areas of visually sensitive land uses south of this area are clustered around Highland and Webster Lakes.

## 2.14 Forest Resources

A summary of forest resources is presented below. Also see the Socioeconomic Impact Study, Appendix H to this Supplement, for more details.

Amounts of forest land were measured in acres according to linear distances of forest types along the proposed route. The only area affected along the proposed route is 4.5 miles of Link 86 from Boston Hill to Webster Substation. Here, a 100-foot expansion of the existing right-of-way would be necessary. Of the 45.8 acres of required forest cover removal, approximately 0.2 acres are mature pine-hemlock stands, 23.6 acres are mixed mature softwood-hardwood stands, and 22.0 acres are mature northern hardwood stands.

Significant sawlog timber types harvested in New Hampshire's forest include hemlock, white pine, spruce fir, yellow birch, hard maple, and oaks. Pulp-woods include spruce fir, white ash, beech, and soft maple. Paper birch, yellow birch, and the oaks are also sources of veneer grade lumber.

Economic losses to New Hampshire caused by the removal of commercial forest land for a transmission corridor would consist primarily of reduction in property tax revenues and in losses of income generated by the logging and processing of timber. Wood product values (1978 stumpage prices) range from \$2-\$3 per cord for hardwood pulpwood and \$2-\$10 per cord for hardwood fuelwood to \$15-\$25 per cord for yellow birch boltwood and \$20-\$30 per cord for white birch boltwood. For sawlogs, 1978 stumpage price per MBF ranges from \$10-\$25 for beech and \$15-\$30 for hemlock to \$40-\$90 for red oak and \$40-\$95 for yellow birch. Yellow birch veneer logs averaged \$100-\$150 per MBF. To predict the total economic impact of each cord of wood lumbered, the value added during manufacturing was estimated at \$730 per cord.

In New Hampshire, taxation of forest land is based on current use assessment. Under the State's yield tax law, timber is taxed when harvested at a rate of 10 percent of stumpage value.

## 2.15 Cultural Resources

A detailed discussion of cultural resources is presented in the Historical-Archeological Impact Study, Appendix J to this Supplement. A summary is presented below.

### 2.15.1 Historic Resources

The villages of Rumney Depot and Rumney are of sufficient content and integrity to warrant planning consideration to protect their resources. Areas of potentially significant structures lie in the eastern outskirts of Monroe,

North Groton, and Alexandria. Outside of these areas are numerous historic houses, covered bridges, and cemeteries scattered within the viewshed of the proposed route.

#### 2.15.2 Archeological Resources

Field surveys revealed no previously undiscovered archeological sites within one-quarter mile of the proposed transmission facilities. Known archeological sites, for the most part, are poorly reported and lack substantiating data. Any new sites discovered could shed light on the total picture of prehistoric activity in the area.

A state-registered prehistoric site is in the viewshed of link 83; and a possible historic foundation lies directly in the center of the Link 83 right-of-way. Link 86 crosses the Mascoma Trail, an Indian trail with potential for archeological material.

## **Section 3**

# **The Environmental Impacts of the Proposed Action**

### 3.0 THE ENVIRONMENTAL IMPACT OF THE PROPOSED ACTION

#### 3.01 Ecological Interrelationships

General ecological interrelationships are discussed in the initial transmission draft EIS on pages 3-1 to 3-3.

#### 3.02 Geology

Construction of the proposed transmission facilities will have little impact on the geologic structure of the region. Some features, such as unstable landslide areas, could potentially damage transmission facilities and affect their reliability. Careful siting and special designs can minimize these hazards. The proposed facilities may be subjected to seismic activity. However, earthquakes of low or medium intensity would have little or no effect on the facilities. The transmission lines, the right-of-way clearings, and the access roads are not influenced by the frequency or intensity of earthquakes. Also see the Geotechnical Impact Study, Appendix F to this Supplement.

#### 3.03 Soils and Topography

The potential for erosion along the proposed route has been evaluated in terms of erodibility of the soil and the degree of the slope. Three and eight-tenths miles (5 percent) of the proposed route were assigned high impact; 38 miles (51 percent) moderate; 32.5 miles (44 percent), slight impact. If during construction an area is stripped and the soil left bare, erosion will undoubtedly occur, especially on alluvial and lacustrine soils. Even soils rated as having only a slight erosion potential will erode if disturbed and left exposed for long periods of time. Thus, construction practices will largely determine how much erosion will actually occur. The erosion potential classification serves as an indication of a soil's rate of erosion with respect to its slope.

Slope stability was evaluated based on slope data and soil descriptions. Generally, only steep and excessively steep slopes will have stability problems. The most severe problems will occur where the degree of slope exceeds 50 percent. Slopes of less than 15 percent should be stable for all soil types evaluated.

The northern-most links of the proposed route would be little affected by the proposed construction, due to the low-to-moderate slope conditions. Link 83 would be moderately affected. Increased sedimentation potential in the southern portion of the proposed route would result in moderately high impacts.

#### 3.04 Mineral and Aggregate Resources

There will be no direct impacts upon areas of present mineral or aggregate extraction. Mining of potential deposits can normally take place beneath existing lines. In other cases, the cost of moving the line is inexpensive relative to the value of the underlying resources.

Certain geophysical exploration techniques are negatively affected by power transmission lines, e.g., electromagnetic survey, resistivity surveys, etc. On the other hand, the building of power lines and access roads might expose more bedrock, thus allowing better evaluation of the area.

### 3.05 Atmosphere

The initial transmission EIS study adequately covers climatological, air quality, and noise impacts. Since the proposed route will occupy an existing cleared right-of-way for more than 90 percent of its length, microclimatic changes from vegetation removal will not be an issue over most of the proposed route. The 4.5 miles of right-of-way which will be cleared for the proposed route will parallel an existing right-of-way, thereby causing less potential microclimatic impact than if a totally new right-of-way were developed.

### 3.06 Aquatic Ecosystems

The number and level of aquatic ecosystem impacts on the region's streams, lakes, and wetlands are listed in Table 3.06-1. A total of 51 streams and 13 wetlands could be affected. Thirty-three streams are crossed obliquely, 9 are crossed perpendicularly, and 9 are paralleled. Seven wetlands are crossed directly, and 6 are downslope from the proposed route. In the northern portion of the proposed route, along link 42F, low-to-moderate impacts may occur on the streams crossed. Along link 81, potential impacts of sedimentation and herbicide runoff on streams is relatively moderate, as are potential impacts on wetlands. Of special concern along this link is French Pond, an important waterfowl area adjacent to the right-of-way. The Baker River is also of special concern, as it is an important salmon fishery. Potential impacts of sedimentation and herbicide runoff on streams is moderate along link 83 and high along link 86. There are several excellent trout streams of special concern crossed by link 86. The most significant impact will occur to streams at link 81 (miles 3, 11 and 16); link 83 (mile 9); and link 86 (miles 4, 7, 14, 17, 18, 21, and 24). Of particular value are Upper Baker River and Childs, Smith, Fowler, Halls, Pattern, and Hardey Brooks. Wetlands impacts along the proposed route are slight along link 83 and moderate along link 86.

TABLE 3.06-1. - AQUATIC ECOSYSTEM IMPACT - SUMMARY 1/  
PROPOSED ROUTE: MOORE-WEBSTER

Impact Levels		Streams		Lakes		Wetlands	
		Number Impacted	Percent	Number Impacted	Percent	Number Impacted	Percent
Slight	1	29	39	1	33	7	31
Low	2	25	34	---	---	4	17
Moderate	3	7	10	1	33	9	39
High	4	5	7	---	---	1	4
Severe	5	7	10	1	33	2	9
		73					

1/ Reference: Ecological Resources Impact Study, Appendix E to this Supplement

An analysis of the 100-year floodplains and of the 13 wetlands that would be crossed was made in accordance with the provision of the Floodplain/Wetland Environmental Review requirements (Executive Orders 11988 and 11990 respectively). There will be no impacts as a result of crossing these floodplain areas in terms of increased hazards of flooding.

Overall impacts to the 13 wetlands directly crossed and to those either down-or up-slope from the facility are indicated in Table 3.06-1. The values shown on this table reflect the overall impact to the aquatic resources including sedimentation, herbicide runoff, and fisheries/wildlife impacts. Impacts associated with increased flood hazard will be minimal to non-existent on those wetlands crossed by the facility.

Because the proposed facility either parallels or shares existing right-of-way it is not possible to avoid floodplain and wetland areas. To avoid these areas would substantially increase impact on many other resource areas and values. Section 8, "Alternatives to the Proposed Action," contains detailed discussion and explanation of the impacts on all alternatives studied and demonstrates that any change from the proposed route will increase resource impacts. No practicable alternative to avoid these floodplains exists.

The Ecological Resources Impact Study, Appendix E to this Supplement treats Aquatic Ecosystem, Vegetation, and Wildlife impact in greater detail.

### 3.07 Vegetation

The alteration of potential rare plant habitats and the alteration of plant communities adjacent to the right-of-way are two possible impacts. Since existing rights-of-way are used over most of proposed route, the potential

alteration of adjacent plant communities is negligible. However, caution should be taken to avoid disturbing adjacent plant communities along the following link miles: the first 4 miles of link 42F; miles 1, 3, 6, 9, 10, 14, 17 and 20 along link 81; miles 1, 10, and 11 along link 83; and miles 1, 17, and 18 along link 86. Impact on potential rare plant habitat is moderate throughout the proposed route, although ledges exhibiting potential rare plant habitat qualities crossed at mile 9 along link 81 and miles 1, 4-7, 10-12, and 19-21 along link 86 are of special concern. (See pp. 3-25 and 3-26, Appendix E to DOE 1978 EIS, for list of potential rare plants native to cliffs.)

### 3.08

### Wildlife

Impacts on the preferred habitat of "most harvested species," "species of special concern," and "all species" will be negligible. The magnitude and duration of all impacts on habitat will strongly depend on the vegetation maintenance procedures used and the specific ecological factors now limiting the wildlife populations along the proposed route. In particular, the most significant impacts on wildlife will be short-term disturbance, by construction activity, of a few species (particularly hawks, golden and bald eagles, great horned and barred owls, and eastern cougar) breeding in and adjacent to the right-of-way. (See Table 4-7, "During Construction Disturbance" column, in Appendix E to DOE 1978 EIS.) Table 3.08-1 shows that approximately two-thirds of the route will have a high disturbance probability. However, the effect of any disturbance on sensitive wildlife along the proposed route will probably be relatively moderate.

TABLE 3.08-1. - DISTURBANCE PROBABILITY 1/  
PROPOSED ROUTE: MOORE-WEBSTER

	IMPACT LEVELS				
	1 (Slight)	2 (Low)	3 (Moderate)	4 (High)	5 (Severe)
Miles	---	---	---	44.7	29.1
Percent	---	---	---	61	39

1/ Reference: Ecological Resources Impact Study, Appendix E to this Supplement.

An important wildlife feature near this route is an active reintroduction site where the peregrine falcon, a threatened species, bred in 1976-79. Although the nest site itself is well outside the route, the U.S. Fish and Wildlife Service, in cooperation with landowners and the White Mountain National Forest, has delineated boundaries of an area it considers potential "critical habitat" for this species, and these boundaries come within a mile of the route. U.S. Fish and Wildlife Service is currently considering incorporating several wetlands, including some intersected by the proposed centerline, in the area it considers potential "critical habitat" for the peregrine. Also, a

few sites where peregrines formerly nested and/or where U.S. Fish and Wildlife Service is currently planning releases of peregrines in the next few years, are located within a mile of the route.

Overhead ground wires present a very minimal collision hazard, due to the falcon's acute eyesight and excellent maneuverability. The peregrine could be adversely impacted by herbicide. However, it might benefit from increased prey associated with forest successional changes induced by the right-of-way. On the whole, it is unlikely that the facility will impact the peregrine significantly either negatively or positively. Any adverse impact on the falcons would be minimized if construction and maintenance activities for this section are controlled during June and July, the breeding season. Control of the use of herbicides in this area would also effectively minimize impacts. If the facility is to be constructed, the DOE will continue to consult with the U.S. Fish and Wildlife Service, as required by the Endangered Species Act, to develop any further impact assessment and to develop appropriate mitigative measures if they are required.

The most important link miles in terms of impact on wildlife through habitat change and disturbance are mile 1 along link 42F, miles 2,3,6,8,16 and 21 along link 81; miles 7,8 and 9 along 83; and, miles 14,25 and 27 along link 86.

### 3.09 Socioeconomic Impacts

Both general and region-specific socioeconomic impacts were identified with respect to both the short-term (construction impacts) and the long-term (operational impacts) and were discussed primarily in terms of non-compatible land uses, esthetics, and community values. For the short-term analysis, it was assumed that labor would be 80 percent local (State of New Hampshire-based) for the survey and clearing phase and 50 percent local for the construction phase; and, that the average hourly wage would equal \$13.00. Also see the Socioeconomic Impact Study, Appendix H to this Supplement.

#### 3.09.1 General Impacts

Through the operational life of the proposed facilities, the esthetic changes of additional land clearing and new transmission lines may have impact on property values and the recreation industry (see Visual-Recreation Resources Impact Study, Appendix I to this Supplement). Although property owners are compensated for land used in right-of-way clearing, other property owners within the viewshed are not. These impacts are dependent on the esthetic component of individual viewshed property values. There may also be some radio and television reception interference at sites close to the proposed lines. Total property tax losses would be minimal. Socioeconomic impacts are summarized in Table 3.09-1.

TABLE 3.09-1. - REGIONAL SUMMARY OF SOCIOECONOMIC IMPACTS 1/  
PROPOSED ROUTE: MOORE-WEBSTER

<u>Types of Impacts</u>	<u>Comments</u>
-Employment	Total employment will be 120 people for 100,000 man hours. Opportunities for local labor will be about 54 people.
-Income	Gross wages will be about \$1.3 million, with approximately \$585,000 to local labor. Anticipated retail sales are \$315,000.
-Tax Loss	Annual \$46 yield tax loss. The proposed facilities will be tax exempt.
-Residential	Severe impact to one residence at mile 29.6 of link 86.

1/ Reference: Socioeconomic Impact Study, Appendix H to this Supplement.

### 3.09.2 Region Specific Impacts

Since the proposed route involves expansion of existing rights-of-way only along its last 4.5 miles, most impacts will involve gaining access to the right-of-way during the construction phase. Potential damage to local roads may be high for links 81 and 86, and moderate for links 41F, 42F, and 83. Potential conflicts with local traffic is high for link 83, and moderate for the other links.

Viewshed impacts on adjacent residential areas will be high along links 41F and 42F, which require the construction of 165-foot double-circuit steel towers. There will be a severe impact to one residence at mile 29.6 along link 86. Socioeconomic impacts are summarized by link in Table 3.09-2.

### 3.10 Existing Land Use

Compatibility of land use with the transmission line was the primary basis for evaluating impacts. Five impact levels were used: severe, high, moderate, slight, and not identifiable. There are potentially severe impacts at mile 29.6 of link 86 where a house is located within the proposed right-of-way expansion. The only other significant land use impact is the removal of approximately 45 acres of forest cover in order to widen the right-of-way for the last 4.5 miles of link 86. Also see the Land Use Impact Study, Appendix G to this Supplement.

Table 3.09-2  
SOCIOECONOMIC IMPACTS BY LINK 1/

Short-term impacts											
Subregion	Link No.	Link Length Miles	Access Roads Miles 2/	Potential Road Damage 3/	Traffic Conflicts	Residential Relocation (No. Trailers)	Residential Relocation (No. Houses)	Forestry (Acres)	Agric. land (Acres)	Conflicts with Local Concern	Viewshed Impacts 6/
VI - A	41F	0.3	0.5	M	H	--	--	--	--	--	H
VI - A	42F	6.2	13.2	M	M	--	--	--	--	--	H
VI - A	81	24.9	5.0	H	M	--	--	--	--	--	S
VI - B	83	12.3	2.4	M	H	--	--	--	--	Rumney	S
VI - C, VII	86	30.1	6.0	H	M	0	1	45.9	4.9	--	S

1/ Reference: Socioeconomic Impact Study, Appendix H to this Supplement

Short-term impacts: During preconstruction and construction work only.

2/ Access roads: Estimated mileage based on estimates on quality of existing access as provided by the Department of Energy (DOE)

3/ Potential road damage: High (H) - limited secondary roads available - no four lane roads available.  
Moderate (M) - network of secondary roads - no four lane roads available.  
Slight (S) - four lane roads - network of secondary roads.

4/ Traffic conflicts: same as for 2/ plus: High (H) - tourist area, sightseeing a major recreation activity.  
Moderate (M) - limited secondary roads local traffic.  
Slight (S) - four lane roads, tourism.

5/ Residential relocation - includes only those residences within proposed right-of-way that parallel existing right-of-way.

6/ Viewshed impact: High (H) - esthetic value of area high - proposed change increases viewshed.  
Moderate (M) - esthetic value high - changes do not extend viewshed.  
Slight (S) - existing development, viewshed not extended.

Impacts on proposed land use would be negligible, primarily because the proposed route is located between two existing steel tower lines within an existing, cleared right-of-way.

The use of existing right-of-way over most of the proposed route greatly reduces the recreational resource impacts. Recreational viewer impacts were deemed low since the potential viewer(s) would observe the proposed facilities in a setting with the existing transmission lines and towers. Preemptive impacts to recreational resources were also primarily low since only existing linear features are affected. Even along the section of the proposed route requiring additional right-of-way clearing (link 86 from Boston Hill to the Webster Substation), the majority of the impacts assigned were low. This proposed right-of-way is relatively devoid of recreational resources.

Both preemptive and recreational viewer impacts are summarized for the proposed route in Table 3.12-1. Also see the Visual-Recreation Resources Impact Study, Appendix I to this Supplement.

TABLE 3.12-1. - RECREATION IMPACTS  
PROPOSED ROUTE: MOORE-WEBSTER 1/

Impact Levels	Preemptive Impacts		Recreational Viewer Impacts	
	Number of Occurrences	Percent	Miles with Impacts	Percent
None	35	31.5	7	9.7
Low	74	66.7	58.6	81.6
Moderate	2	1.8	2.2	3.1
High	--	--	4	5.6
Severe	--	--	--	--

1/ Reference: Visual - Recreation Resources Impact Study, Appendix I to this Supplement.

Almost all preemptive recreational impacts assigned along the proposed route were low. The Appalachian Trail and its proposed relocation are the exception. Moderate impacts were assigned these features where they would be crossed by the proposed route along link 83. In the area requiring a clearing of new right-of-way (along link 86 between Boston Hill and the Webster Substation), only two recreational resources were crossed. Both were assigned low impacts.

Most frequently impacted were linear recreational features including the aforementioned Appalachian Trail, potential State-designated Scenic or Recreational Rivers, and recreational highways (used as fall-foliage, scenic, sightseeing, or bicycle routes). Important "recreational" highways crossed by the proposed route include Routes 135, 302, 25, 25A and 104. Important potential State Recreational or Scenic Rivers crossed by the proposed route include the Ammonoosuc River (used for fishing and canoeing), the South Branch of the Baker River, and the Smith River. Links 81 and 83 also traverse portions of the White Mountain National Forest and its Proclamation Area. In these areas, low impacts were assigned due to the presence of the existing right-of-way.

### 3.12.2 Recreational Viewer Impacts

The most significant viewer impact features of the proposed transmission facilities occur along the route's shortest links: 41F and 42F. Here, the proposed facilities include double-circuit steel towers 165 feet high. As such, they would be visible from the Moore and Comerford Reservoirs, both important recreational water bodies. High and moderate impacts were assigned along these links. At the opposite end of the proposed route, a moderate impact was assigned mile 30 of link 86 where the proposed right-of-way extension would be viewed from a small ski area on Flag Pole Hill and Routes 3A and 11, both State-designated bicycle routes.

All other recreational viewer impacts are low, reflecting the limited visual impact which would result by using the existing right-of-way. The middle portion of the proposed route, including link 83 and portions of links 81 and 86, is the route's most frequently viewed section. Here, recreational users associated primarily with the White Mountain National Forest would view the proposed facilities.

### 3.13 Visual

The location, construction, and maintenance of the proposed transmission lines will have varying degrees of visual impact. These impacts will depend on the facilities' compatibility with their surroundings, the scenic quality of the area, the screening provided by terrain and vegetative cover, and the design of the structures, access roads, and right-of-way. Impacts will also depend on the number of viewers at any given point, their distance from the line, their activity at the time of viewing, and their subjective reaction to the scene. Three categories of impact have been identified: viewer impacts, landscape quality impacts, and site attractiveness impacts. All three impact categories are summarized in Table 3.13-1. Also see the Visual-Recreation Resources Impact Study, Appendix I to this Supplement.

TABLE 3.13-1. - VISUAL IMPACTS 1/  
PROPOSED ROUTE: MOORE-WEBSTER

		IMPACT LEVELS				
		1	2	3	4	5
		(None)	(Low)	(Moderate)	(High)	(Severe)
Landscape	(Miles)	3.9	34.2	34.5	1.0	0.2
Quality:	(Percent)	5.3	46.3	46.7	1.4	0.3
Site	(Miles)	69.3	0.1	3.8	0.5	0.1
Attractiveness	(Percent)	93.9	0.1	5.2	0.7	0.1
Viewers	(Miles)	---	63.8	6.0	4.0	---
	(Percent)	---	86.5	8.1	5.4	---

1/ Reference: Visual-Recreation Impact Study, Appendix I to this Supplement.

### 3.13.1 Viewer Impacts

Average viewer impacts are relatively uniform throughout the proposed route. As all links involve right-of-way sharing, low impacts predominate. They are assigned along 63.8 miles of 73.8 miles of the proposed route. Higher double-circuit steel towers along parts of link 42F by the Connecticut River and Moore Reservoir will have significant impact on recreation viewers. Other significant viewer impacts occur in the vicinity of Boston Hill, along the eastern slope of Flag Pole Hill, and at the Chance Pond Brook crossing, due to the proposed right-of-way expansion along the southern portion of link 86.

### 3.13.2 Landscape Quality Impacts

Landscape quality impacts are generally low to moderate along the proposed route. These low values reflect the extremely high landscape absorption conditions found within an existing right-of-way for a wood pole facility which does not significantly surpass the existing facilities in size and does not require right-of-way expansion.

### 3.13.3 Site Attractiveness Impacts

Generally, there are no site attractiveness impacts. This reflects the proposal to occupy an existing transmission right-of-way from the Moore Substation to Boston Hill along link 86, and to parallel an existing right-of-way for 4.5 miles from Boston Hill to the Webster Substation. Site attractiveness impact values of "none" are assigned for 69.3 miles; "low" impact values, for 0.1 miles; "moderate" impact values for 3.8 miles; "high" impact values, for 0.5 miles; and, "severe" impact values, for 0.1 miles. The "severe" impact is assigned along mile 30 of link 86 where Chance Pond Brook would be crossed.

### 3.14 Forest Resources

The proposed route would require the removal of approximately 45.8 acres of forest along the 4.5 miles of link 86 from Boston Hill to the Webster Substation. This would result in the annual loss of approximately 30 cords of roundwood, which represents \$465.00 in stumpage value and \$46.00 in tax revenue.

### 3.15 Cultural Resources

Both direct (right-of-way) and indirect (visual intrusion) impacts caused by the construction, operation, or maintenance of the proposed transmission line were considered. Three types of cultural sites are distinguished: archeological (below-ground historic and prehistoric sites), historic (standing structures and above-ground historic resources), and cemeteries. Indirect impacts were considered as an inverse function of distance: sites 0.0 to 0.3 miles from the centerline were assigned "high" indirect impacts; sites 0.4 to 0.6 mile were assigned "moderate" impacts; and, sites beyond 0.7 miles were assigned "low" impacts.

Also see the Historical-Archeological Impact Study, Appendix J to this Supplement.

#### 3.15.1 Historic Resources

No historic resources will be directly affected. Additional visual impact would be virtually eliminated by construction of visually compatible transmission lines between existing ones. The present lines have already created impacts, and these prior impacts will probably not be altered by adding lines down the middle.

#### 3.15.2 Archeological Resources

A direct impact will occur to what appears to be the remains of an old stone wall of a foundation adjacent to a stream within the link 83 right-of-way. It may be a mill remnant, but this could not be determined. Mitigation for recovering data or relocation of the proposed facilities may be necessary.

### 3.16 Electrical Effects

Electrical effects of the proposed facilities are discussed in the initial transmission draft EIS on pages 3-124 to 3-133. The effects discussed include audible noise, electromagnetic interference, field effects, oxidants, and electrical hazards.

There will be very little public exposure to the line, especially along the western portion, as the facility is located in the center of a 350-foot right-of-way. The 4.5 miles of line between the large right-of-way and the Webster Substation parallels an existing line. Adjacent land uses include rural residential, farmland, and forest production. In total, 1 trail (Appalachian Trail) and 42 highways and roads will be crossed by the facility.

## **Section 4**

### **Mitigation Measures Included in the Proposed Action**

Section 4 of the DOE draft EIS, published in April 1978, lists certain measures to mitigate environmental impacts if the proposed transmission facilities are constructed. Those measures, which are not site specific, apply equally well to this supplemental proposal, except for measures involving location or relocation of the centerline to avoid a particular impact. Since the primary advantage of this proposed supplemental route is its utilization of an existing right-of-way, the opportunity for impact avoidance through relocation will be rare--but, fortunately, so will the need. It is difficult to improve on a location between two existing lines, in the center of a cleared right-of-way which has been established for 50 years. However, the last 4.5 miles do present an opportunity for relocation, either by deviating from parallel or by crossing to the other side of the existing 115-kV line. These options will be considered in final centerline siting and design.

In addition, because there will be no new access roads, mitigation techniques for such construction in the April 1978 draft do not apply to this segment.

## **Section 5**

**Any Adverse Effects Which Cannot be Avoided  
Should the Proposal be Implemented**

5.0 ANY ADVERSE EFFECTS WHICH CANNOT BE AVOIDED SHOULD THE PROPOSAL BE IMPLEMENTED

5.01 Geotechnical Resources

An unavoidable short-term increase in runoff and erosion will result from vegetation removal and surface compaction. Soils will be permanently displaced. Subsoils will be disturbed at tower locations and footing excavations and at access road cuts and fills. This will disrupt soil profiles. The rate of erosion will decrease as revegetation progresses.

5.02 Atmospheric Resources

During construction some unavoidable adverse impacts on air quality will be caused by dust from disturbed soils, combustion by-products from the burning of unmerchantable wood products, vehicle and equipment exhaust emissions, and fumes and odors from various operations. These impacts are expected to be localized and short-lived.

Small amounts of ozone will be introduced into the atmosphere during line operation. Levels will vary, depending on climatic conditions, but are considered to be insignificant.

In some areas, adverse microclimatic changes may occur along the rights-of-way where forest vegetation has been altered. Removal of this vegetation will cause minor, long-term microclimatic changes in air temperature, solar radiation, and wind velocities.

Local noise levels will increase during line construction. Though unavoidable, these impacts are expected to be intermittent and of short duration. Line operation will result in minor, long-term increases in local noise levels. Overall, such noise levels are considered annoyances with no adverse health effects.

5.03 Ecological Resources

Adverse impacts on hydrological resources include increased surface runoff and erosion, increased turbidity and sedimentation, the possible introduction of small amounts of herbicides, and possible channel alteration by vehicular traffic. Slight increases in water temperature could have secondary impacts on other resources where vegetation has been removed from stream and pond banks. Most of the impacts will occur during construction and will disappear shortly after the line is completed.

Existing vegetation will be disturbed or removed along portions of the route. The primary impacts that will result from this loss of vegetation include the alteration of growth patterns and forms, disruption of successional stages, changes in community composition both within and outside the rights-of-way, and possible disturbance of rare or sensitive plants. Secondary impacts from snowmobile and other recreational vehicle use of rights-of-way and access roads are largely unavoidable.

Removal of vegetation will alter wildlife habitat. The quantity of habitat will be reduced for some forest species, directly reducing their numbers and, in turn, their overall productivity. Increased disturbance of certain species during construction will result in significant stress and the possible temporary abandonment of preferred habitat. Disturbance will continue after construction, owing to human activity along new access roads. Possible increase in animal hunting mortalities could result from easier accessibility. Changes in vegetation will benefit some wildlife in the area.

Birds may occasionally collide with the transmission lines. The birds most likely to do so are waterfowl. (See Table 4-7, "Collision Hazard" column, p. 4-22, Appendix E to the DOE 1978 EIS.)

Impacts on aquatic wildlife from changes in stream temperature would be long-term and potentially quite adverse. The effect of herbicides introduced into the food chain would depend on the amounts and type used, and the methods used to control vegetation. Only those herbicides on the "approved" list of the Environmental Protection Agency would be used. Aquatic wildlife could experience intense, though short-term and localized, impacts from increased turbidity, sedimentation, and disturbance of streambeds.

#### 5.04 Land Use Resources

The proposed project would preempt use of the land at tower sites and along permanent access roads. Small areas of agricultural land would be taken out of production for tower footings. Timber production and sap extraction would be eliminated along cleared rights-of-way and permanent access roads.

The proposed plan would restrict land use within the right-of-way to types compatible with high voltage transmission lines.

#### 5.05 Socioeconomic

Slight, yet unavoidable, impacts on housing, employment, income, tax receipts, public and private services, or the supply of goods and services are expected from the proposed plan. Loss of economic production on cultivated lands will occur at tower sites.

#### 5.06 Visual

Towers, lines, and rights-of-way, together with the visual consequences of certain necessary construction practices, will result in unavoidable visual impacts. Varying degree of impact are expected on the quality of the visual landscape, the visual attractiveness of individual sites, and on recreation, residential, and transportation-related viewers. The introduction of visual elements out of character with historic properties could possibly alter their settings.

#### 5.06 Recreational Resources

Views of the lines will conflict with some recreational activities and detract from the recreation experience. Some visual impact is unavoidable.

Historic properties or archeologic resources will not experience direct impacts from the construction or operation of the line, as an intensive survey would be conducted to locate and thus avoid sites. Increased accessibility to some areas, however, could contribute to site vandalism. Disturbance or destruction of undiscovered archeological sites is possible due to construction activities. Such impacts are not totally avoidable.

## **Section 6**

# **The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity**

6.0 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S  
ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM  
PRODUCTIVITY

For this discussion, "short-term" will refer to the life of the line. It is reasonable to assume that some of the impacts related to the transmission line would last beyond this period. Existing rights-of-way will probably continue to provide one of the best routes for new transmission facilities. For these reasons, electric transmission facilities will probably continue to exist in established corridors.

6.01 Resource Relationships

6.01.1 Geotechnical Resources

Soil disturbed and eroded by the short-term use of the powerline corridor will result in minor long-term losses in productivity, but most of the impacts will diminish shortly after the project is completed.

6.01.2 Atmospheric Resources

Effects of short-term air quality impacts will result in no appreciable reduction in long-term air quality. Microclimatic changes along cleared rights-of-way would gradually diminish in the unlikely event that the facilities should be decommissioned and removed.

6.01.3 Ecological Resources

The effect on long-term water productivity and water quality should be minimal. Most impacts on water resources would abate soon after construction of the line is completed. Adherence to proper mitigation measures would insure against any significant reduction in water quality.

Some effects of vegetation removal and disturbance could persist longer than the projected life of the line. Certain resistant weedy species are inevitably introduced. These plants often proliferate and can supplant existing species, leading to long-term, perhaps permanent alterations in community composition. Even if the facilities are eventually removed, a return to former conditions would take decades.

Although many adverse impacts on wildlife would abate after construction of the line, several changes in wildlife productivity would persist beyond the life of the line. Ecological relationships between predators and prey and those between competing species can be thrown out of balance. Disrupting such a fragile balance can set into motion a synergistic cycle of effects, making the return to original conditions a lengthy and perhaps impossible process.

6.01.4 Land Use

When a powerline is built, the right-of-way is committed to use for electric power transmission. The land can no longer be used for commercial forestry, nor can structures be built on it. Land areas limited by their use for

electrical facilities could be restored to former uses, or used for some new purpose, should the line be decommissioned and removed. Some land uses, such as agriculture, can coexist with the facility during its operational life.

Long-term indirect effects on adjacent land uses may occur through short-term use of the land for powerline rights-of-way. Future transmission lines will likely involve using existing substations, upgrading existing lines, or paralleling existing rights-of-way. This could tend to discourage the development of residences, commercial establishments, scenic areas, and public parks which may be incompatible with transmission lines. Thus, the corridor could limit opportunities for short-term use and long-term productivity of adjacent lands.

#### 6.01.5 Socioeconomic

Over the life of the transmission line, such noncompatible uses as forestry and development of structures would not be permitted. However, the availability of the right-of-way for such uses could be restored, if desired, by removal of the line. Thus, the use of the land for right-of-way does not in a permanent sense influence its economic productivity or the availability of its resources.

#### 6.01.6 Visual

Short-term effects on esthetic resources would result from the visual presence of the line itself. These visual impacts could be felt over the long term. Should the line be removed later, the scarring effects of constructing, operating, and removing the line would continue to affect visual resources for an extended period.

#### 6.01.7 Recreation

Recreational resources will incur both short- and long-term adverse and beneficial effects from the short-term use of the transmission line corridor. Recreational activities requiring remote or natural landscapes could suffer. Increased hunting and snowmobiling within the rights-of-way could have long-term positive and negative effects.

#### 6.01.8 Historic-Archeological

Short-term use of a transmission line right-of-way could result in permanent loss of part of the archeologic record in the region should undiscovered sites be accidentally disturbed during construction. Long-term increases in accessibility to potential archeological sites could further jeopardize this resource.

#### 6.02 Trends Affecting Ecological Interrelationships

Ecological interrelationships on or adjacent to construction sites would be irreversibly altered by construction activities. These changes would last

until the effects of vegetation removal and soil disturbances stabilize and a new ecosystem begins to function. In many instances, the new ecosystem may be more productive.

#### 6.03 Long-term Risks to Health and Safety

Transmission lines impose a threat to public safety because they carry electric power at high voltages. There is a potential but remote danger of human contact with electricity in the line during the life of the facility, despite stringent design precautions. The results of contact accidents are usually very serious.

Any of numerous catastrophes, such as earthquakes, floods, lightning, and accidents, including aircraft collisions with the line, though a remote possibility, could damage the line and pose a risk to public safety.

## **Section 7**

**Any Irreversible and Irretrievable  
Resources Which Would be Involved  
if the Project Should be Implemented**

7.0 ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES  
WHICH COULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE  
IMPLEMENTED

Irreversible commitments of resources include resource commitments that, once initiated, would continue after the life of the project. Irretrievable resources are those that are expended or permanently lost through the proposed action.

7.01 Geotechnical Resources

The sites occupied by the transmission towers commit underlying resources such as agriculturally productive soil and mineral or aggregate deposits to alternative use throughout the life of the project. The erosion or displacement of topsoil is considered an irretrievable resource loss.

7.02 Atmospheric Resources

The proposed action will have no irreversible or irretrievable impacts on air quality or the atmosphere as a resource.

7.03 Ecological Resources

Certain terrestrial vertebrates would experience an irretrievable loss of habitat. Habitats with significant potential for harboring rare or sensitive plants could be irretrievably altered by construction activities and consequent microclimatic changes.

7.04 Land Use

Land use for tower footings are considered irreversibly committed for the life of the facility. Some long-term indirect impacts on land uses adjacent to the facilities could result. Removal of the system would not necessarily allow return of the land to its former uses.

7.05 Socioeconomic

Material used in the construction of the towers and line including steel, aluminum, copper, and wood will be irretrievably committed to transmission use, although most such retired equipment is either reclaimed for use on other transmission facilities or recycled. Estimates of these resources have been made based on the mileage of the preferred route.

Tons of tower steel, conductor steel, and conductor aluminum will be used in the proposed transmission line. These materials will be irretrievably committed for the life of the project.

Fuel consumption for equipment during construction will be irretrievably committed to the project.

## 7.06

### Visual Resources

Visual resources would be irreversibly altered by the proposed action. Construction of the facilities would physically alter the landscape. If the lines were to be removed at the end of the project's life, features of the landscape would still be modified somewhat. Also, utility rights-of-way are sometimes upgraded or expanded to meet future needs. Thus, in this sense, the intrusion of a man-made form on natural settings can be considered to be irreversible.

## 7.07

### Recreational Resources

Most recreational activities would continue despite the presence of the lines. Those types of recreation oriented towards scenery would be modified to some extent. Since the rights-of-way would be committed to utility use over a long term, the impacts may be considered irreversible.

## 7.08

### Historic and Archeological Resources

Undiscovered archeological resources could be accidentally disturbed during construction, and perhaps suffer irreversible damage due to the disruption of stratigraphy.

## **Section 8**

# **Alternatives to the Proposed Action**

## 8.0 ALTERNATIVES TO THE PROPOSED ACTION

### 8.01 Introduction

This section of the EIS discusses alternatives to the proposal which have been investigated. These include: the alternative of not building the transmission system; alternative locations to integrate the facility into the New England electric system; and design alternatives.

The major focus of this section is the overall rankings of and significant impacts associated with the 15 alternative route combinations studied by the environmental consultants retained by DOE for this project. Tables 8.03-1 and 8.03-3 show these alternative preferences and rankings.

### 8.02 Alternative of Not Building Transmission Lines

Alternatives to the Dickey-Lincoln School Lakes project are addressed in Section 6 of the final EIS prepared by the U.S. Army Corps of Engineers. If the project were not built, the proposed transmissions system would not be required. If the project is built, only by conventional transmission facilities can the power be transmitted to load centers.

#### 8.02.1 Use of the Existing Transmission Systems

There are existing 115-kV transmission lines from Moore to Beebe and from Beebe to Webster. Moore is connected to Comerford by two 230-kV lines and two 230-kV lines extend south from Comerford, passing within 4 1/2 miles of Webster. The System Planning Supplemental Study (Appendix A) demonstrated without question that the existing transmission facilities in the area are not adequate to integrate the new generation into the system. Additional facilities are required to get power out of the generating plant into the NEPOOL system in a dependable way.

### 8.03 Transmission Line Route Alternatives

All transmission line routes were identified in the Transmission Reconnaissance Study (Appendix D of this Supplement), and analyzed by a multidisciplinary environmental team.

Detailed environmental impact studies were conducted on the network of alternative routes shown on Figure 8.03-1, Facility Locations. These studies, conducted primarily by New England consulting firms, address the following resources: geotechnical, ecological, socioeconomic, visual and recreational, land use, and historic-archeological. Study reports for these investigations are enclosed as supplementary appendices E through J and appendix K, (a map volume) to this supplementary EIS.

Upon completion of the studies, the multidisciplinary environmental consulting team ranked the alternative routes based on environmental impact. These rankings were the key to the decisionmaking process that DOE used in proposing a route. The consultants' recommendations on the alternative routes are provided in the subsequent discussions.

### 8.03.1 General Description

There are 15 route alternatives within Segment F. The number of alternatives reflects: 1) various combinations of links, and 2) the options of building the transmission line on the inside of existing rights-of-way, or outside and parallel to existing rights-of-way. The option also exists to build the facility in the middle of an existing, cleared, transmission line right-of-way.

Each consultant was asked to describe the most significant impacts along each link studied and to recommend whether the facilities should be located on the inside or outside of an existing corridor or right-of-way. These choices are represented in Table 8.03-1.

Figure 8.03-1 shows the general location of the links studied; and, Table 8.03-2 indicates the link combinations that comprise the route alternatives, including the inside, middle, and outside options. Individual routes are diagrammed in Fig. 8.03-2. Also see the Transmission Reconnaissance Study, Appendix D to this Supplement.

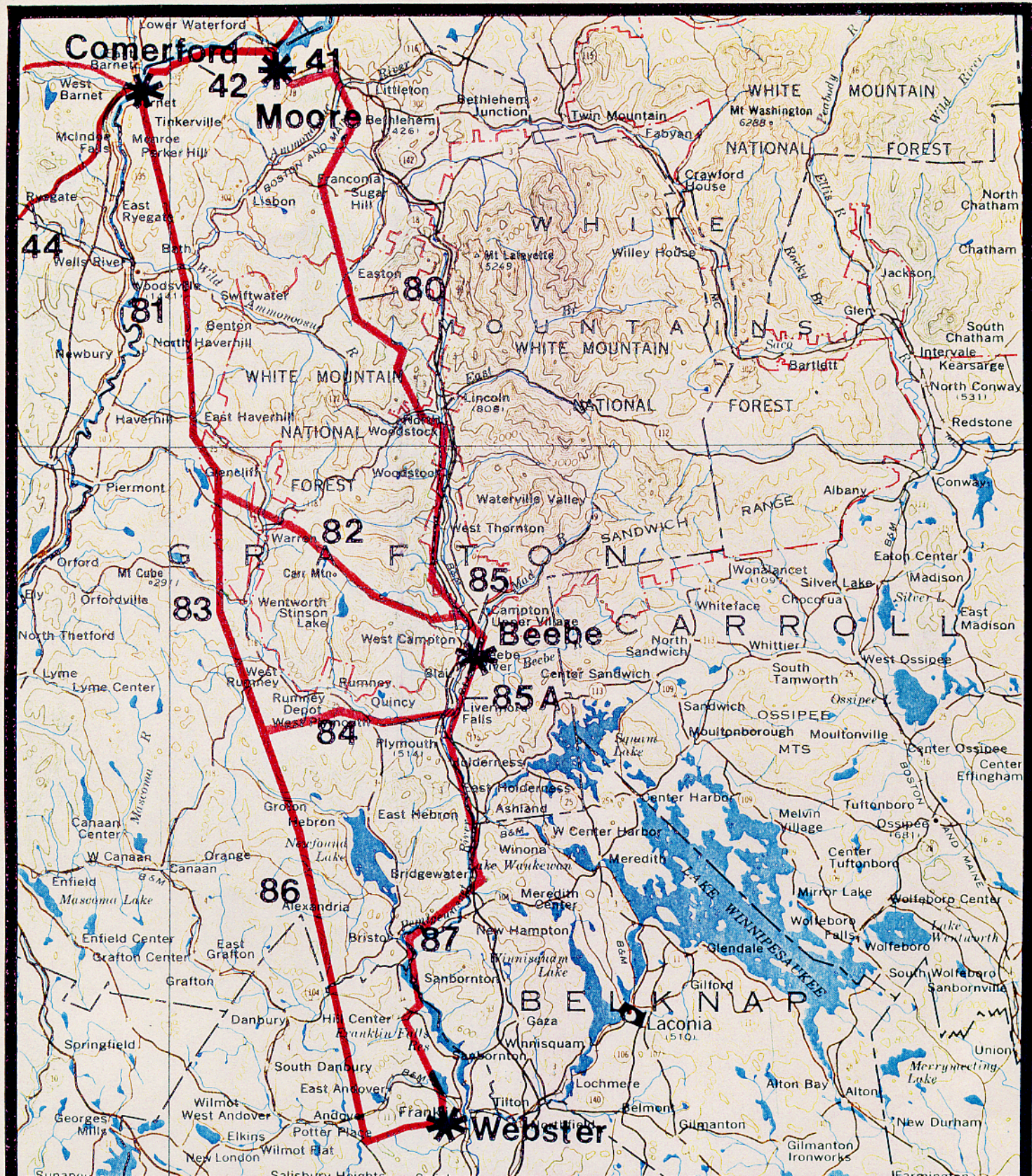
From the information on link impacts and inside-outside options, DOE defined route alternatives to be evaluated and comparatively ranked. Each consultant provided an overall ranking of the 15 potential routes, based on his/her in-depth analysis of the links and their environmental impacts. The impact ranking by resource topics for each alternative is listed in Table 8.03-3.

### 8.03.2 Significant Impacts of Alternative Routes

The significant impacts identified by each resource consultant and the primary factors influencing the rank order are discussed below. For further impact discussion of each alternative, also see the appropriate appendix supplement.

#### Geotechnical

The geotechnical analysis results indicate that the FB3 ii and FB3 oi alternatives to Beebe would have the least overall impact. These routes are ranked first and second respectively. In fact, the five top-ranked alternatives are all Beebe routes. Although distance is a key determinant of the geotechnical ranking, FB1 i, the shortest Beebe alternative, is ranked third because the steeper average slopes encountered along link 80 increase impact scores for erosion potential, sedimentation potential, and slope and soil instability. Although the top ranked FB3 alternatives incorporate the link 84 crossover through the Baker River Valley, the low slope conditions along this link indicate minimal impact from the proposed action. FB2 ii and FB2 oi (fourth and fifth place), contain link 82, which has the highest impact value among all the links of the Segment F. These impact values were less, however, than the higher total impacts scores of longer alternatives terminating at Webster Substation.



DICKEY/LINCOLN LAKES TRANSMISSION - E.I.S. PROJECT

## FACILITY LOCATIONS

U.S. DEPARTMENT OF ENERGY - BANGOR, MAINE AUGUST 1980

### LEGEND

- Proposed Route
- Alternative Route
- ★ Existing Substation
- 86 Link Number

SCALE IN MILES

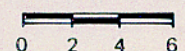


FIGURE 8.03-1

TABLE 8.03-1 - PREFERENCES FOR LINK OPTIONS SEGMENT F

	<u>Link:</u>		<u>Link:</u>		<u>Link:</u>		<u>Link:</u>
	80		81		83		85
	<u>i</u> <sup>**</sup> <u>o</u>	<u>i</u> <u>m</u> <u>o</u>	<u>i</u> <u>m</u> <u>o</u>	<u>i</u> <u>o</u>	<u>i</u> <u>o</u>	<u>i</u> <u>m</u> <u>o</u>	<u>i</u> <u>o</u>
Geotechnical	T* T	X		X	T	T	
Ecological	X	T T		T T	X		
Socioeconomic	X	X		X	X		
Forestry	X	T T		T T	X		
Land Use	X	X		X	X		
Recreation	X	X		X	X		
preemptive	O	O		X	O		
rec. viewers	O	O		X	O		
Visual	X	X		X	X		
viewers	O	X		X	O		
site attractive	O	X		X	O		
landscape qual.	T T	X		X	O		
Historic/Arch.	X	X		X	T T		
historic	O	O		X	O		
archeological	T T	O		O	O		
Site Engineering	X	X		X	O		

\*

T = Tie, no preference  
X = major category preference  
O = sub-category preference

\*\*i = inside option  
m = middle option  
o = outside option

TABLE 8.03-2 ALTERNATIVE ROUTES/LINKS - SEGMENT F

ROUTES*	LENGTH (MILES)	41F	42F	46F	47F	80i	81i	81m	81o	82	83i	83m	83o	84	85i	85ai	86i	86m	86o	87i
FW1	72.3					X									X	X				X
FW2 i	73.8	X	X				X				X						X			
FW2 m**	73.8	X	X					X				X						X		
FW2 o	73.8	X	X						X				X							X
FW3 ii	80.6	X	X				X			X					X	X				X
FW3 oi	80.6	X	X						X	X					X	X				X
FW4 ii	81.7	X	X				X				X			X						X
FW4 oi	81.7	X	X						X				X	X						X
FW5 io	88.4					X								X	X	X			X	
FW5 ii	88.4					X								X	X	X	X			
FB1	43.6			X	X	X									X					
FB2 ii	51.9	X	X	X	X		X			X					X					
FB2 oi	58.9	X	X	X	X				X	X					X					
FB3 ii	58.4	X	X	X	X		X					X		X			X			
FB3 oi	58.4	X	X	X	X				X				X	X			X			

\*\*Proposed Route

\*Route Notation Key:

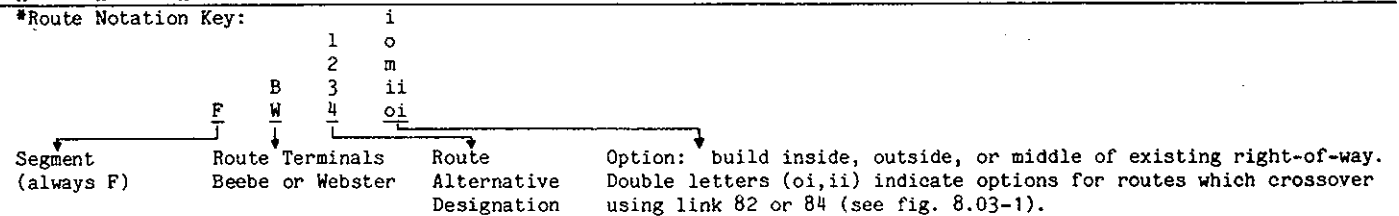
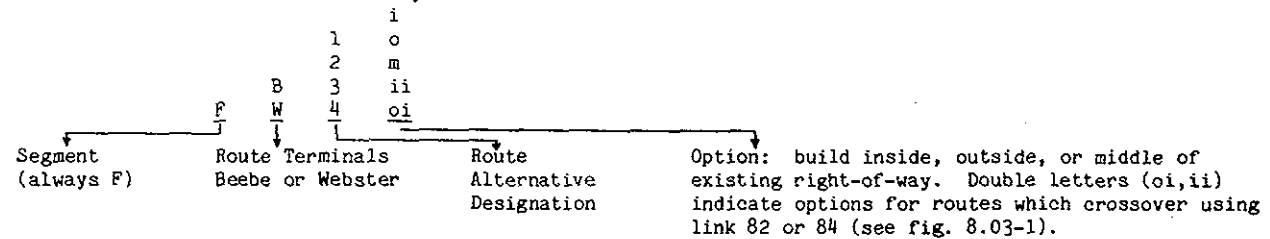


TABLE 8.03-3

IMPACT TOPICS	ALTERNATIVE ROUTE IMPACT RANKINGS - SEGMENT F														
	FW1	FW2			FW3		FW4		FW5		FB1	FB2		FB3	
	FW1 i*	FW2 i	FW2 m**	FW2 o	FW3 ii	FW3 oi	FW4 ii	FW4 oi	FW5 io	FW5 ii	FB1 i	FB2 ii	FB2 oi	FB3 ii	FB3 oi
Geotechnical	8.0	10.0	9.0	11.0	12.5	12.5	6.5	6.5	15.0	14.0	3.0	4.5	4.5	1.5	1.5
Ecological	13.5	2.0	1.0	13.5	7.0	9.5	8.0	11.0	15.0	12.0	4.0	3.0	6.0	5.0	9.5
Socioeconomic	4.0	2.0	1.0	8.0	13.0	15.0	6.0	10.0	11.0	7.0	3.0	12.0	14.0	5.0	9.0
Forestry	5.5	2.0	1.0	15.0	7.5	10.5	3.5	12.5	14.0	9.0	5.5	7.5	10.5	3.5	12.5
Land Use	8.0	1.5	1.5	14.0	6.0	11.0	5.0	13.0	15.0	10.0	7.0	4.0	9.0	3.0	12.0
Recreation	4.0	5.0	1.0	2.0	13.0	11.0	9.0	7.0	14.0	15.0	3.0	12.0	10.0	8.0	6.0
Visual	3.0	13.0	1.0	8.0	9.0	7.0	12.0	11.0	14.0	15.0	2.0	6.0	4.0	10.0	5.0
Historic/Archeologic	7.0	12.5	2.0	4.0	12.5	8.0	15.0	10.5	10.5	9.0	1.0	5.0	3.0	14.0	6.0
Site Engineering	4.0	15.0	1.0	3.0	11.0	8.0	14.0	7.0	9.0	12.0	2.0	10	5.0	13.0	6.0




\*\*Proposed Route

\*Route Notation Key:



# ALTERNATIVE ROUTE DIAGRAM

## LEGEND

-  Alternative Route
-  Existing Trans. Line
-  Substation

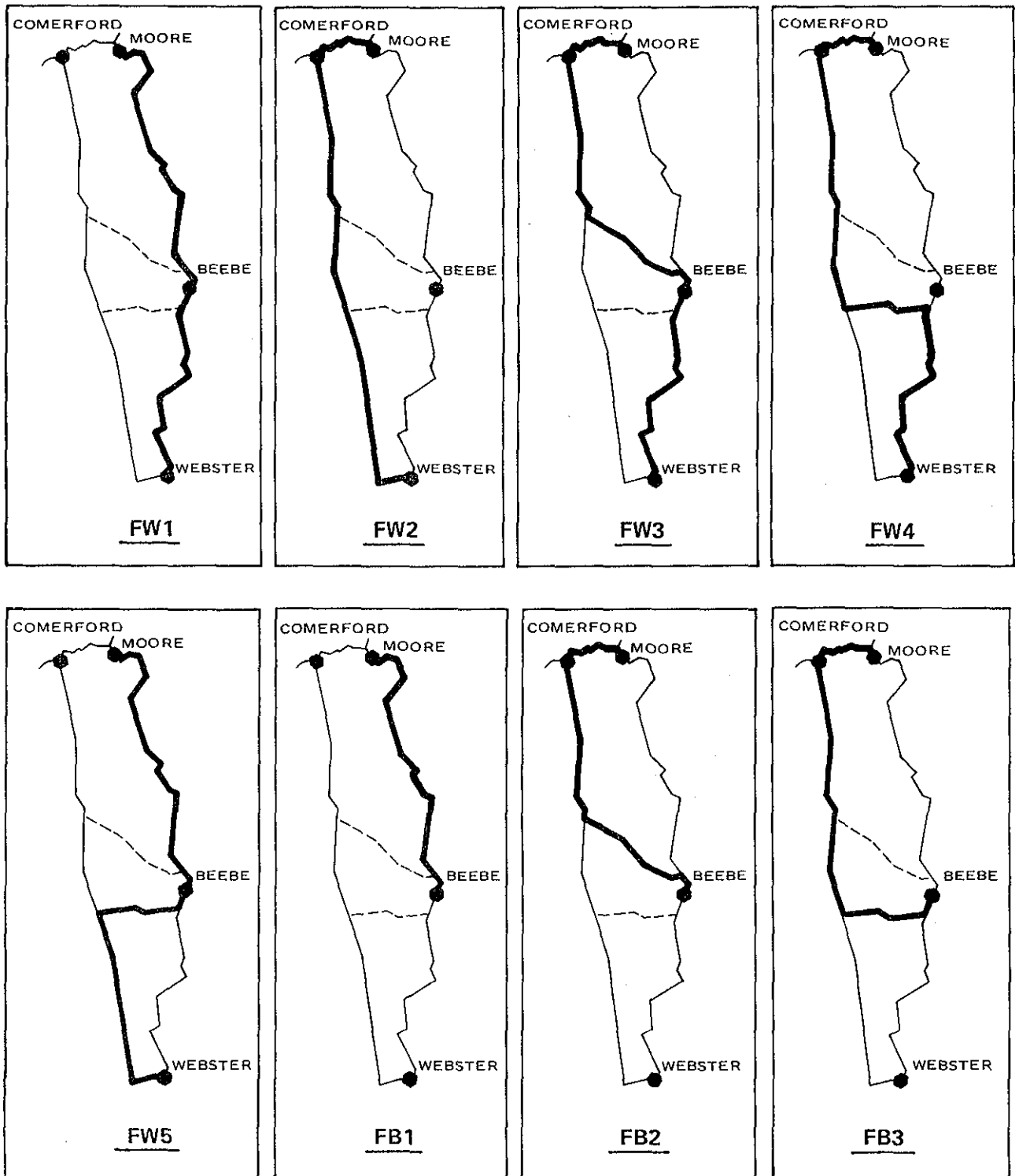


FIGURE 8.03-2

FW4 oi and FW4 ii are the preferred routes to Webster from a geotechnical standpoint. These routes incorporate the link 84 crossover, and avoid the higher geotechnical impacts of link 86. The third ranked route to Webster is FW1 i. The proposed route, FW2 m, ranks fourth relative to Webster and ninth relative to Segment F. The major reason for the lower ranking of the FW 2 alternatives is the use of link 86 with its increased sedimentation potentials. It is also the second longest link.

The FW 3 and the FW 5 alternatives are the least preferred. Not only are they among the longest of the proposed routes, but they incorporate the links with the three highest geotechnical impact scores (links 80, 82, 83).

### Ecological

The preferred routes from an ecological perspective are those using the existing right-of-way, FW2 m and FW2 i. The next preferred is FB2 ii, which uses the link 84 crossover and terminates at Beebe. FW2 m and FW2 i were chosen due to their zero terrestrial impact scores for "acres of forest removed," "habitat fragments" disturbed, "rare plant potential," and "negative habitat changes." Although wetland and stream impacts were higher along the western routes, they did not increase total impact scores sufficiently to rank them lower than the Beebe alternatives.

It may appear that the FB2 ii alternative to Beebe, which incorporates a new right-of-way along the link 84 crossover, would have significantly higher impacts than the more direct FB1 i alternative. However, forest cover removed is actually less along link 84 than along the inside option of link 80, because 29.9 miles of right-of-way expansion is proposed along the latter. The inside option is only applicable south of North Woodstock. In addition, more acres of wetlands are crossed and stream impacts are significantly higher along FB1 i. FB1 i is, however, the fourth ranked alternative.

On a link-by-link basis, the inside option is always preferable to the outside option, for the following four reasons: (1) the increased clearing required for the outside options will cause further increases in stream temperatures which are detrimental to trout; (2) clearing additional forest cover will further isolate adjacent vulnerable habitat fragments; and (4) while it is unlikely that a rare plant species would be growing within the existing right-of-way, additional right-of-way clearing will pose a potential threat to rare plants. Widening a 225-foot right-of-way by 100 feet may be ecologically more significant than widening a 150-foot right-of-way by the same amount, because the 300 ft. width appears to be a threshold for certain wildlife species. Beyond 300 feet, open-land species may markedly increase while some forest species quickly drop out. Additional research is warranted to test this relationship.

Of concern in the Segment F study area are the Bog Pond area, a peregrine falcon nest southeast of Bog Pond, and habitat fragments in the Moore Dam vicinity along link 80; extensive forest cover removal and habitat disturbance (especially the West Branch deer yard) along link 82; numerous habitat fragments intersected by link 84, in addition to the Baker River and its associated wetlands; and, a deer yard adjacent to the existing right-of-way at

Foster Swamp just north of Hill along link 86. Of special concern throughout the study area are the potential rare plant habitats among the numerous ledges crossed by the route alternatives and the numerous stream, brook, and river crossings. (See pp. 3-25 and 3-26, Appendix E to DOE 1978 EIS for list of potential rare plants native to cliffs.)

### Socioeconomic

The proposed route, FW2 m, is preferred from a socioeconomic perspective. The principal factors in determining route and link selections are: effects upon immediate residents, conflict with unique wilderness areas, conflicts with community concerns, and loss of timber production. The only significant socioeconomic impacts along the proposed route occur along the last 4.5 miles of link 86. They involve the removal of approximately 45 acres of forest and the potential relocation of one residence. FW2 i, with slightly higher impacts due to the double-circuit steel tower configuration, ranks second; FB1 i to Beebe is ranked third; and FW1 i is ranked fourth. Although link 80i, which received high impacts for its encroachment into existing "Further Study" zones of the White Mountain National Forest, is included in both of these alternatives, the extremely low impacts associated with the inside wood pole construction over the other routes offset high impacts encountered over the first 29.9 miles. FW2 o and FW5 o were the least preferred alternatives.

Impacts of major overall concern occur along link 80i, 82, and 84. Routes which include link 82 are considered unacceptable because of the incompatibility with the "Further Study" zones of the White Mountain National Forest. Of concern along link 80 i are the conflicts with community values in the Sugar Hill vicinity and encroachment on "Further Study" zones. Link 84 is undesirable due to its conflict with community values in the Baker River Valley (Rumney, Rumney Depot, and Quincy) and its encroachment on Livermore Falls State Forest. All outside link options received higher impacts due to the loss of timber production and the potential relocation of adjacent residences.

### Forestry

Route preference based on forestry impacts is fairly straightforward. Of primary concern is the total acreage of forest removed and the associated tax and product value losses. Thus, the proposed route, FW2 m, and alternative FW2 i are preferred. Their forest impacts are identical in that they involve the removal of approximately 45 acres of forest cover between Boston Hill and Webster along link 86. More importantly, the annual volume of roundwood loss estimated for the inside and middle western routes is less than half of that estimated for the FB3 ii and FW4 ii routes which collectively ranked second.

From an overall forestry perspective, routes that incorporate inside options requiring the least additional right-of-way are preferred. The least preferred links, those with the highest estimated annual forest product losses, are 81 and 86 outside and 80 inside (due to extensive forest removal along the first 29.9 miles). Link 80 i, in fact, would be responsible for more annual forest product losses than link 82, which requires a new 150-foot right-of-way clearing through forest cover over almost its entire length.

## Land Use

From a land use perspective, inside link options require no additional clearing and, thus, result in little land use impact. These inside options play a critical role in determining the proposed route alternative rankings. Although listed as an inside option, link 80 ranks low due to the high land-use impact of the first 29.9 miles where additional clearing will be required. Significant land use impacts involve the removal of forest cover along approximately 24 miles, crossing the Appalachian Trail and Bog Pond (a recent addition to the White Mountain National Forest), and potential impacts on a significant number of residences. Therefore, the top four ranked routes do not incorporate link 80i and use only inside options. In addition to the preferred route, these routes are FB3 ii, and FB2 ii, which ranked second, third, and fourth respectively. Even though the third- and fourth-ranked Beebe alternatives use links 82 and 84, the additional impacts incurred are not sufficient to offset the high impacts of using link 80 i to Beebe. In fact, FB1 i is ranked seventh. FW4 ii incorporates all inside option links and link 84 through the Baker River Valley. Even though this is one of the longer route alternatives, it ranks above four much shorter Beebe alternatives that include outside options.

Since links 82 and 84 are used in most of the route alternatives above, their major impacts need to be discussed. Link 82 crosses the Appalachian Trail and will require extensive forest clearing for its entire length, representing nearly 300 acres of timber. In addition, the link crosses the Baker and Pemigewasset rivers, as well as three brooks. Most of link 84 can be located on open farmland to minimize disturbance to existing land uses. However, forest resources will be affected in the vicinity of Bailey Hill and within the boundaries of the Livermore Falls State Forest. A house and mobile home within the proposed link 84 corridor will be disturbed with the proposed route alignment.

Land uses potentially affected by using inside link options of the top-ranked routes are as follows: a trailer park in the vicinity of Campton lies within the proposed alignment of link 85; two mobile homes currently encroach on the existing right-of-way along link 85a; along link 87, the area around the Webster Substation is particularly congested and may make it difficult to avoid 5 residences; and, a number of brook and river crossings along all links require attention for proper tower location and construction activities.

## Recreation

After the preferred route, FW2 m, those which ranked second, third, and fourth are FW2 o, FB1 i, and FW1 i respectively. FW2 o ranked second because few recreational resources actually occur within the area of right-of-way expansion; and, the proposed towers associated with the outside option would be lower and less visible than those of the inside on the west. Although the FB1 i alternative is the shortest proposed route and uses the wood pole inside option from North Woodstock to Beebe, the high preemptive impacts associated with the 100-foot right-of-way expansion along the first 29 miles of this route (much of which is through the White Mountain National Forest and adjacent "Further Study" zones) caused this alternative to be ranked below the

two inside western routes. The 165-foot tall, double-circuit steel towers used with the western FW2 i route increases recreational viewer impacts considerably. Since little impact was realized in adding the inside option of link 85a and 87 to the FB1 i links to form FW1 i, this eastern inside alternative to Webster was ranked fourth.

The three most significant factors in ranking the 11 other alternatives include: the double-circuit steel towers along the inside western options; the length differential between the Beebe and Webster routes; and, the high viewer and preemptive impacts associated with the two crossover links--82 and 84. Since the remaining alternatives received much higher impact scores as a group, distance became the critical factor in choosing the shorter FB2 and FB3 Beebe alternatives over the longer FW3, FW4, and FW5 Webster routes. Link 84 was preferred over link 82; the outside option was preferred over the inside along the western alternative because it involves fewer viewer impacts with no significant increase in preemptive impacts. As a result, the FB3 routes were chosen over the FB2 routes, and FW4 routes over the FW3 routes. The FW5 routes were ranked last.

Main areas of recreational impact concern are the Pemigewasset River Valley, the White Mountain National Forest, and, to a lesser degree, the Baker River Valley. The route within the Pemigewasset River Valley passes through an extremely popular area in the heart of the White Mountains and the Franconia Notch State Park, containing the highest density of recreational resources within the Segment F study area. Although the design alternatives proposed within the valley do not significantly alter the viewsheds, the greater number of potential recreational viewers in this area increases the potential impact of even minor right-of-way or transmission facility changes. Major resources in the Pemigewasset River Valley include: I-93, Route 3, and Route 175, popular fall-foliage and scenic routes; campgrounds and motels; and natural features such as The Flume, The Pool, and the Indian Head profile.

The National Forest is traversed by links 80, 81, 82, and 83. Significant resources within the National Forest include cabins of the Appalachian Mountain Club and of the Dartmouth Outing Club; numerous camping areas, shelters, and tent platforms; and, hiking and cross-country ski trails, including the Appalachian Trail. Links 80 and 82 affect most strongly these recreational resources of the National Forest, as they would require new or expanded rights-of-way through semi-wilderness areas. Links 82, 83, and 80 cross the Appalachian Trail.

The inside options of the western design alternatives would most dramatically affect recreational resources of the National Forest by greatly expanding the viewsheds of the transmission line.

Of major concern within the Baker River Valley are: Baker State Forest; Livermore Falls State Forest; historic resources in Rumney and Rumney Depot; the Polar Caves; and, campgrounds situated along the river. These would suffer viewer and preemptive recreational impacts from construction along link 84.

## Visual

FW2 m is the preferred route; FB1 i and FW1 i rank second and third respectively. The FW5 alternative is least preferred. Three principal criteria are responsible: (1) link length, particularly as it relates to terminating at either Beebe or Webster; (2) the variable impacts associated with the inside, outside, and middle design alternatives; and (3) the generally higher impacts characteristic of links 80, 82, and 84. Link length does much to explain why four of the five Beebe routes are ranked in top six positions. However, use of the inside and, more importantly, the middle alternatives, would greatly reduce impacts; accordingly, FW2 m is ranked first, and FW1, third. The much higher impacts of link 82 and 84 cause lower ranking (fourth, fifth, sixth) of three shorter Beebe routes. The FW5 route alternatives are least preferred; they are the longest of the 15 proposed routes, and they incorporate the link 84 crossover and its associated high impacts. These factors cancel the benefits of lower impact associated with the incorporation of link 80 i in both FW5 alternatives.

Significant impacts along the top-ranked routes occur in link 80i where the line crosses the Moore Reservoir, along portions of the proposed right-of-way expansion viewed from Sugar Hill, and at the crossing of the Appalachian Trail. Since no right-of-way expansion or increased tower height is proposed along other portions of the FB1 i and FW1 i alternatives, they contribute no additional significant impacts. Among other proposed alternatives, areas of significant impact occur along link 84, in the Baker River Valley (particularly near the Villages of Rumney and Rumney Depot); and along link 82, particularly at the crossing of a secondary ridge on Mt. Kineo, in full view of the Breezy Point resort.

## Cultural

FB1 i has the least impact on cultural resources. FW2 m, the proposed route, is ranked second and FB2 oi third. Although the first-ranked Beebe alternative must incorporate the 29.9 miles of new right-of-way expansion along link 80i, it creates only two significant cultural impacts: visual impact on a covered bridge and on an historic farm complex in the Pemigewasset River Valley. Link 85 completes FB1 i to Beebe and would entail only two significant visual impacts, an historic residence and an historic covered bridge.

FB2 oi and FW2 o are ranked third and fourth, respectively. FB2 oi uses the outside options of link 81, thus avoiding the higher historic viewer impacts of the double-circuit steel towers, and the link 82 crossover, which would have virtually no cultural resource impacts. FW2 o uses the outside option along the western alternative. Potential impacts along this route include a state-registered prehistoric site along link 83, the crossing of the historic Mascoma Trail (potential archeological material) and potential impacts on several historic residences along link 86.

Within other alternatives of Segment F, links 84 and 86 (inside) encounter the areas of highest cultural impact. Link 84 includes sections of the historic villages of Rumney Depot, Rumney, and Quincy, in addition to several historic sites and structures. Link 86 (inside) affects Rumney Depot. It is also viewed from the town center of Groton and encounters the highest number of potential prehistoric sites of any in the study area. Link 86 outside includes historic sites, a few prehistoric sites, and several historic cemeteries. Consequently, the FW3, FW4, and FW5 alternatives comprise the least preferred routes of Segment F.

### Site Engineering

The proposed route, FW2 m, is favored from an engineering standpoint, even though it is slightly more costly than some of the Beebe alternatives. Fewer construction and maintenance difficulties are anticipated. Accessibility is very good, and only a minor amount of clearing will be required. Also, routing the line directly to Webster avoids a fairly difficult substation expansion at Beebe and some relatively severe climatic and soil conditions on link 80 in the Bog Pond area.

However, the next four ranked alternatives involve Beebe. These, in order, are FB1 i, FB2 oi, FB3 oi, and FB2 ii. They are shorter and relatively less costly. The eastern alternatives, particularly from Beebe south, present numerous design problems, difficult but not insurmountable, related to alignment, spacing, and clearance.

FW2 i is ranked last because of the excessive cost of rebuilding the 230-kV line using double-circuit construction.

### 8.04                      Summary of Alternative Route Comparison

The previous discussion has focused on explaining, from an impact topic viewpoint, the rank order of the 15 routes. The following general summary points out the major reasons behind these preference ranks.

As discussed in Section 3, the preferred alternative is a route approximately 74 miles long, most of which will be located in an already cleared right-of-way owned and maintained by the New England Power Company. The consultants who studied the alternatives concluded that this was by and large the route of least impact, despite the facts that: (1) it is 30 miles longer than the shortest alternative, one that would go directly from the Moore Substation to Beebe Substation; and (2) it is only 15 miles shorter than the longest alternative that goes on to Webster, the route of worst impact.

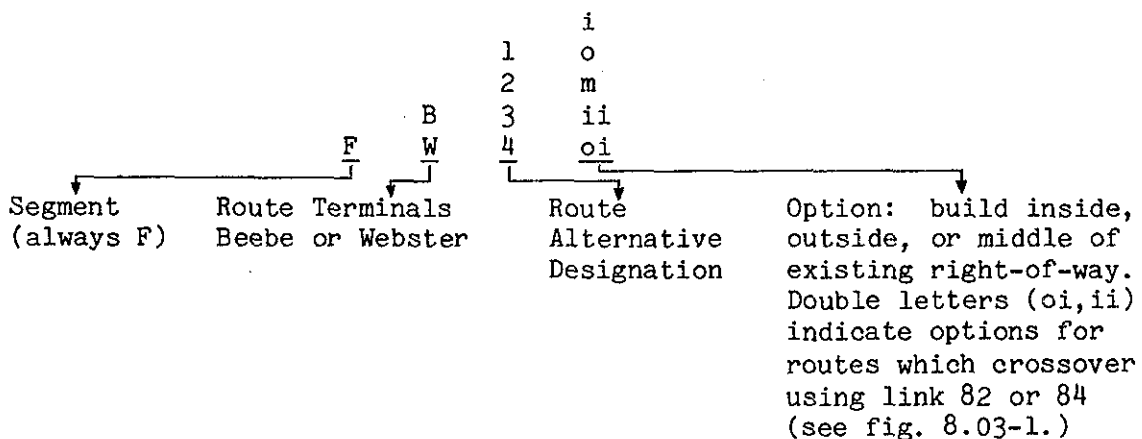
The preferred route would have significantly fewer impacts, except for some geotechnical concerns, than any of the other options. Table 8.04-1 synthesizes the impact rankings from Table 8.03-3. It lists the ranks of the routes in relative order from most preferred to least preferred, to give a relative picture of the groupings of the alternatives based on overall impacts. As seen in the table, there appear to be four clusters of alternatives with similar levels of impact. The first cluster (A) contains

the proposed route (FW2 m) and alternative FB1 i to Beebe that would be built on the inside of the existing right-of-way along Links 80 and 85. Ten miles of this route (FB1 i) would be parallel; the rest would involve rebuilding on existing right-of-way. This route is the shortest, and would be all wood-pole construction, but would have land use impacts in the White Mountain National Forest. Additional clearing would also affect forestry potential.

TABLE 8.04-1 RELATIVE IMPACT RANK SCORE

	<u>Route*</u>	<u>Length (miles)</u>	<u>Impact Rank Score</u>
A	FW2m	73.8	19.5
	FB1i	43.6	29.5
B	FW1i	72.3	57
	FW2i	77.0	63
	FB3ii	58.4	63
	FB2ii	58.9	64
	FB2oi	58.9	66
	FB3oi	58.4	67.5
C	FW2o	73.8	78.5
	FW4ii	81.7	79
	FW4oi	81.7	88.5
	FW3ii	80.6	91.5
	FW3oi	80.6	92.5
D	FW5ii	88.4	103
	FW5oi	88.4	117.5

\*Route Notation Key:



The next cluster of alternatives (B) represents the mid-range of impact potential. It includes both options that go from Moore to Webster and the remaining options from Moore to Beebe. The lengths of these options vary by about 20 miles, primarily the distance from the Beebe and Webster area, but the sums of ranks are quite close. Both Webster options, FW1 i and FW2 i, would be built inside an existing right-of-way by tearing down and rebuilding existing structures. The significant differences between these routes and the proposed route would be their higher ecological, land-use, and historic/archeologic impacts, and significantly higher costs stemming from the need to tear down an existing facility and rebuild a new one. FW1 i is ranked lowest in this cluster primarily because of its wood-pole construction, whereas FW2 i would use double-circuit 165-foot-high steel towers, which substantially increase visual impact.

The other three routes all go from Moore to Beebe and are basically the same length. Although they are approximately 15 miles shorter than the proposed route, the total environmental impacts would be higher because each alternative uses crossover Links 82 or 84. Both crossovers would require right-of-way clearing. Link 82 traverses a future study area for potential wilderness where the visual and ecological impacts would be quite high, and there would also be impacts associated with acquiring and opening a new right-of-way through undeveloped areas. Link 84, also part of FB3 alternatives, would have high socioeconomic, land use, and forestry-related impacts. This crossover link also travels through and crosses the Baker River valley and the Rumney Depot area, significantly affecting historical concerns.

All remaining alternatives go from Moore Substation to Webster, utilizing both eastern and western sets of links. In the next cluster, (D), alternatives range in length from 74 to 82 miles, and have similar impact rankings, all considerably higher than the proposed alternative. This is primarily because of additional new right-of-way needs; Route FW2, for example, follows the same route as the proposal, but, being parallel, would take up an additional 100 feet of right-of-way for approximately 74 miles. Such right-of-way width increases imply substantial ecological, forestry, and land use impacts, particularly since the existing right-of-way, at 350 feet, is already wide. An increase to 450 feet would have substantial implications for visual and esthetic resources and for adjacent land uses. However, this option would be all wood-pole, as would the proposal.

The FW3 and 4 options use the crossover Links 82 or 84, meaning additional new right-of-way and the accompanying increases in visual problems and other concerns as discussed above.

The FW5 alternatives were least desirable. They would follow the eastern routes (Link 80, 85, and 85 a), cross back over to the west (Link 86) on Link 84, parallel an existing facility along Link 86, and then parallel the 115-kV line for 4 1/2 miles to Webster. Following this relatively circuitous route from Moore to the Webster Substation requires 15 miles more than the proposed route; impacts would be increased significantly to the point where these are clearly the least desirable alternatives.

The process of corridor comparison and ranking by experts with a detailed knowledge of the impacts ensures that a wide range of alternatives is considered and provides a sound basis for proposing one of the alternatives. Based on an objective analysis of environmental, engineering, economic, and electrical planning criteria, the proposed route, FW2 m, is the best choice.

The appended studies contain more detailed descriptions of alternatives and impact discussions by topic for each alternative and link.

#### 8.05 Alternative Types of Towers and Reconductoring

Alternative transmission tower design for a 345-kV line are shown on Figure 8.05-1 of the DOE Draft EIS. Alternatives to the proposal for this supplemental study include:

Moore-Comerford: (1) two single-circuit wood pole structures; (2) two single-circuit steel structures.

Comerford-Webster: (1) double-circuit steel, strung on one side for 230 kV and the other side for 345 kV; (2) single-circuit steel, either in the center of the existing right-of-way or parallel to it.

The towers proposed for the Moore-Comerford section of the line are the double-circuit steel towers that will be used from Dickey Substation to Moore Substation, as indicated in the April 1978 DEIS. The alternatives available were not selected because of the additional right-of-way that would be required. Also, two single-circuit steel towers would be more expensive than the proposed tower.

The Moore-Webster proposal is to use single-circuit wood poles in the center of the cleared New England Power Company right-of-way. The alternative (FW2 i), to the double-circuit steel towers would be the proposed all-wood towers. Using single-circuit steel towers for the proposal would not be economically preferred.

Most of the proposed and alternative routes are located parallel to or between existing transmission lines. These facilities were examined to determine if it would be possible to reconductor any of the existing lines. Because of the weight of the conductors necessary to carry the full capacity of the line, the required ground and vegetation clearances to meet all electrical safety standards, and the present and future use of the existing lines, reconductoring is not a feasible option.

For a description of the design characteristics of these options, see section 8.05 of the DOE Draft EIS.

## **Section 9**

# **Consultation and Coordination With Others**

The Department of Energy, in developing the scope of work for the Dickey-Lincoln School Lakes Transmission Study, recognized the need for a great deal of consultation and coordination. Consultation, coordination, and public involvement were integral parts of the study design. Furthermore, a consultant's location and experience in northern New England were important factors in choosing consultants for the study.

The System Planning Study (Appendix A to this Supplement) was accomplished with outstanding cooperation by the electric utilities of the region. NEPLAN, the planning arm of the New England Power Pool, played a major role in these studies.

During the regional corridor study phase (part of the initial transmission EIS effort) coordination with agencies and groups with regional responsibility was emphasized. Contacts were established early with Federal and State agencies and regional planning commissions and utilities, major paper and land management companies, and environmental groups. Many meetings and discussions were held with representatives of these agencies and groups.

In the spirit of "open planning and scoping" and to solicit additional input directly from the people of the region, public information meetings were held in June 1976, at Presque Isle, Bangor, and Augusta, Maine; Concord and Berlin, New Hampshire; and Montpelier, Vermont. In December 1976, with the corridor study complete, another series of public meetings was held, this time in Presque Isle, Jackman, Bangor, and Augusta, Maine; Concord and Groveton, New Hampshire; and Montpelier, Vermont.

At the earlier planning meetings, the discussion focused on all corridor possibilities that could reasonably be considered as locations for transmission facilities. While the results of the initial study did not indicate need for the facility to extend to the Webster Substation at the authorized level of generation, the ultimate level did include transmission to the Beebe-Webster area. Thus, the open meetings to define issues and review corridors did present to the people of central New Hampshire the possibility of future transmission requirements now considered as part of the requirements for the authorized level of transmission.

DOE has held discussions with towns along the alternative routes. Working with the Regional Planning Commissions, DOE staff members arranged to attend Planning Commission meetings to present the study and to solicit input from planners, selectmen, and town representatives. Several towns were represented at each meeting. These meetings were held in Lincoln (North County Council) and Meredith (Lakes Region Planning Commission).

Individual property owners were not contacted during this study. If the project is approved and funded for construction, landowners along the proposed route will be consulted during actual right-of-way and structure location.

Throughout the project a great deal of coordination took place between the Department's study team and the U.S. Army Corps of Engineers, responsible for studies relating to the dam and reservoir. Staff members also worked closely with the U.S. Fish and Wildlife Service which has project responsibilities under the Fish and Wildlife Coordination Act. Staff members briefed a number of state agencies regarding on this supplemental study.

The following pages list agencies, groups, and individuals who were in contact with Department's study team, and with whom some degree of consultation or coordination took place.

## CONTACTS

### ENVIRONMENTAL GROUPS

Natural Resources Council  
Sunkhaze Chapter of Trout Unlimited  
National Wildlife Federation  
Sportman's Alliance  
The Maine Association of Conservation  
Commissions  
Maine Audubon Society  
Land Use Foundation of New Hampshire  
New Hampshire Association of Conservation  
Commissions  
Society for Protection of New Hampshire  
Forests 1/  
Statewide Program to Conserve Our Environment  
Nature Conservancy  
New Hampshire Wildlife Federation  
The Loon Preservation Committee 1/  
Vermont Natural Resources Council  
Conservation Society of Vermont  
Appalachian Mountain Club 1/  
Appalachian Mountain Club 1/  
Friends of the St. John 1/

Augusta, Maine  
Bangor, Maine  
Bar Harbor, Maine  
Gardiner, Maine

Kennebunkport, Maine  
Portland, Maine  
Concord, New Hampshire

Concord, New Hampshire

Concord, New Hampshire  
Concord, New Hampshire  
Durham, New Hampshire  
Manchester, New Hampshire  
Meredith, New Hampshire  
Montpelier, Vermont  
Townsend, Vermont  
Boston, Massachusetts  
Gorham, New Hampshire  
Boston, Massachusetts

### PLANNING COMMISSIONS

Androscoggin Valley Regional Planning  
Commission  
South Kennebec Valley Regional Planning  
Commission  
Penobscot Valley Regional Planning Commission  
Northern Maine Regional Planning Commission  
Eastern Mid-Coast Regional Planning Commission  
Southern Maine Regional Planning Commission  
North Kennebec Regional Planning Commission  
North Country Council, Inc. 1/  
Upper Valley-Lake Sunapee Council 1/  
Lakes Region Planning Commission 1/  
Central New Hampshire Regional Planning  
Commission  
Chittenden County Regional Planning Commission  
Central Vermont Regional Planning Commission  
Southern Windsor Regional Planning Commission  
Northeastern Vermont Development Association

Auburn, Maine

Augusta, Maine  
Bangor, Maine  
Caribou, Maine  
Rockland, Maine  
Sanford, Maine  
Winslow, Maine  
Franconia, New Hampshire  
Lebanon, New Hampshire  
Meredith, New Hampshire

Bow, New Hampshire  
Essex Junction, Vermont  
Montpelier, Vermont  
Springfield, Vermont  
St. Johnsbury, Vermont

1/ Contacts established during the supplemental study.

## STATE AGENCIES

### Maine

Department of Inland Fisheries and Wildlife	Augusta, Maine
Department of Forestry	Augusta, Maine
Department of Inland Fisheries and Wildlife	Bangor, Maine
Land Use Regulation Commission (LURC)	Augusta, Maine
Department of Conservation	Augusta, Maine
Maine Bureau of Geology	Augusta, Maine
Department of Parks and Recreation	Augusta, Maine
Department of Agriculture, Soil and Water Conservation Commission	Augusta, Maine
State Geologist	Augusta, Maine
State Planning Office	Augusta, Maine
State Historic Preservation Office	Augusta, Maine

### New Hampshire

Department of Resources and Economic Development	1/	Concord, New Hampshire
Bureau of Off Highway Vehicles		Concord, New Hampshire
Division of Economic Development		Concord, New Hampshire
Division of Forests and Lands		Concord, New Hampshire
Division of Parks and Recreation		Concord, New Hampshire
State Historic Preservation Office		Concord, New Hampshire
Fish and Game Department	1/	Concord, New Hampshire
Water Resources Board	1/	Concord, New Hampshire
Coordinator of Federal Funds	1/	Concord, New Hampshire
Department of Energy		Concord, New Hampshire
Office of State Planning	1/	Concord, New Hampshire
State Geologist	1/	Concord, New Hampshire
Department of Public Works and Highways	1/	Concord, New Hampshire
Water Supply and Pollution Control Commission	1/	Concord, New Hampshire

### Vermont

Division of Historic Preservation	Montpelier, Vermont
Department of Forest and Parks	Montpelier, Vermont
Environmental Conservation Agency	Montpelier, Vermont
Department of Fish and Game	Montpelier, Vermont
Planning Board	Stowe, Vermont
Public Service Board	Montpelier, Vermont
State Planning Office	Montpelier, Vermont
Vermont Water Resources Department	Montpelier, Vermont

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## FEDERAL AGENCIES

### Department of Justice

U.S. Attorney's Office

Bangor, Maine

### Department of the Interior

U.S. Fish and Wildlife Service 1/

Concord, New Hampshire

U.S. Department of the Interior

Office of Environmental Project Review

Washington, D. C.

U.S. Geological Survey

Concord, New Hampshire

National Park Service 1/

Boston, Massachusetts

Inter-Agency Archeological Service

National Park Service

Atlanta, Georgia

Heritage Conservation and

Recreation Service 1/

Philadelphia, Pennsylvania

### Department of Agriculture

Soil Conservation Service 1/

Durham, New Hampshire

Forest Experiment Station

Grafton Co., New Hampshire

University of Maine 1/

Orono, Maine

Forest Service Eastern Region 1/

White Mountain National Forest

Laconia, New Hampshire

## UTILITIES

Carrabasst Light & Power

North Anson, Maine

Central Maine Power Company

Augusta, Maine

Union River Electric Corp.

Aurora, Maine

Bangor Hydroelectric Co.

Bangor, Maine

Eastern Maine Electric Corp.

Calais, Maine

Maine Public Service

Presque Isle, Maine

Granite State Electric Co.

Lebanon, New Hampshire

Littleton Water & Light

Littleton, New Hampshire

Public Service Co. of New Hampshire 1/

Manchester, New Hampshire

New Hampshire Electric Corp.

Plymouth, New Hampshire

Public Utilities Commission 1/

Concord, New Hampshire

Village, Inc.

Barton, Vermont

Green Mountain Power Corp.

Burlington, Vermont

Light Commission

Hardwick, Vermont

Village of Hyde Park, Inc.

Hyde Park, Vermont

Vermont Electric Corp.

Johnson, Vermont

Electric Light Department

Ludlow, Vermont

Electric Plant

Lyndonville, Vermont

Washington Electric Corp., Inc.

E. Montpelier, Vermont

1/ Contacts established during the supplemental study.

Municipal Electric Association,  
 Morrisville Water & Light  
 Citizens Utilities Co.  
 Light Commission  
 Allied Power & Light Co.  
 Vermont Marble Co.  
 Rochester Electric Light & Power  
 Connecticut Valley Electric Co.  
 Vermont Electric Power Co.  
 Light Commission  
 Northeast Public Power Association  
 Massachusetts Municipal Wholesale  
 Electric Co.  
 NEPLAN 1/  
 Northeast Utilities  
 Stony Brook Energy Center  
 New England Power Service Company 1/

Morrisville, Vermont  
 Newport, Vermont  
 Northfield, Vermont  
 Pittsford, Vermont  
 Proctor, Vermont  
 Rochester, Vermont  
 Rutland, Vermont  
 Rutland, Vermont  
 Stowe, Vermont  
 Littleton, Massachusetts

Ludlow, Massachusetts  
 W. Springfield, Mass.  
 W. Springfield, Mass.  
 Westover, Mass.  
 Westborough, Mass.

#### UNIVERSITIES

Cooperative Extension Service, University  
 of Maine  
 Department of Anthropology, University  
 of Maine  
 Dartmouth Outing Club, 1/  
 Dartmouth College  
 Plymouth State College 1/

Bangor, Maine  
 Orono, Maine  
 Hanover, New Hampshire  
 Plymouth, New Hampshire

#### TIMBER COMPANIES

Boise Cascade Corp.  
 Brown Paper Company  
 Dead River Company  
 Diamond International Corp.  
 Dunn Heirs  
 Georgia Pacific Corp.  
 Great Northern Paper Co.  
 James W. Sewall Co.  
 J. M. Huber Corp.  
 Maine Woodlands International Paper Co.  
 North Maine Woods  
 St. Regis Paper Co.  
 Scott Paper Company  
 Seven Islands Land Company

Rumford, Maine  
 Berlin, New Hampshire  
 Bangor, Maine  
 Old Town, Maine  
 Ashland, Maine  
 Woodland, Maine  
 Millinocket, Maine  
 Old Town, Maine  
 Old Town, Maine  
 Jay, Maine  
 Presque Isle, Maine  
 Bucksport, Maine  
 Winslow, Maine  
 Bangor, Maine

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## OTHER CONTACTS

Citizens Advisory Committee for the  
Governor of Maine  
Jackman Planning Board  
Kennebago Camp Owners Association  
League of Women Voters of Maine  
Berlin, Town of (Community Development  
Director)  
International Generation and Transmission  
Company, Inc.  
Walkers Pond Water Conservation Society  
  
Dartmouth-Lake Sunapee Region Assoc. 1/  
New Hampshire Campground Owners Assoc.  
New Hampshire Good Roads Association 1/  
New Hampshire Municipal Association  
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Lincoln, Town of 1/  
Andover, Town of 1/  
Bristol, Town of 1/  
Thorton, Town of 1/  
Woodstock, Town of 1/  
Rumney, Town of 1/  
Franklin, Town of 1/  
Barnet, Town of 1/  
Plainfield, Town of  
Peacham, Town of  
Tenneco, Inc.  
Social Assessment Services

Farmington, Maine  
Jackman, Maine  
Oguossoc, Maine  
Winthrop, Maine

Berlin, New Hampshire

Berlin, New Hampshire  
Conway Center,  
New Hampshire  
Lebanon, New Hampshire  
Meredith, New Hampshire  
Concord, New Hampshire  
Concord, New Hampshire  
Wolfboro, New Hampshire  
Lincoln, New Hampshire  
Andover, New Hampshire  
Bristol, New Hampshire  
Thorton, New Hampshire  
Woodstock, New Hampshire  
Rumney, New Hampshire  
Franklin, New Hampshire  
Barnet, Vermont  
Plainfield, Vermont  
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## **Section 10**

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Registered Professional Engineer, State of Oregon

Broad scope of electric utility engineering activities both in production and supervision and management. Instrumental in development of environmental procedures at BPA. Joint author of Environmental Criteria for Electric Transmission Systems, USDI/USDA, 1970, 52 pp.

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B.S., Landscape Architecture, University of Wisconsin, 1967

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Research and teaching related to land resource analysis; partnership in consulting firm specializing in environmental impact assessment; preparation and management of transmission environmental studies.

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Forest engineering; surveying and mapping; location and reconnaissance engineering; special study for national system of joint-use corridors; management of transmission study teams; land acquisition.

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Natural resource planning; impact assessment; architecture; program development and management; alternative energy system research.

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Economic analysis; historic preservation planning; municipal and regional  
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Geology and geotechnical soil analysis; bedrock and groundwater investigations.

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Cultural Resource Management Projects

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Historical Investigation

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Field archeological surveys in advance of construction.

## **Section 11**

# **Bibliography**

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SUMMARY

DICKEY-LINCOLN SCHOOL LAKES  
TRANSMISSION PROJECT

( ) DRAFT (SUPPLEMENT)

(X) FINAL ENVIRONMENTAL STATEMENT

Responsible Office: Department of Energy  
Bonneville Power Administration  
P. O. Box 3621  
Portland, Oregon 97208  
Attention: Mr. Timothy J. Murray  
1-503-234-3361 x4611

1. Type of Action: (X) ADMINISTRATIVE ( ) LEGISLATIVE

2. Description of Action: The proposed action is the construction of: a steel double-circuit 345-kV transmission line from Moore Substation near Littleton, New Hampshire, to Comerford Substation near Monroe, New Hampshire; a 345-kV wood pole transmission line from Comerford Substation to Webster Substation near Franklin, New Hampshire. The total length of the proposed line is 73.8 miles. Sixty-nine (69) miles of the proposed line would be built on existing cleared right-of-way owned by the New England Power Company, assuming that final agreement with the company will accord with our established preliminary arrangements. It has not been determined what organization would construct the different facilities required to integrate the generation into NEPOOL. For the purposes of this impact statement, it is assumed that the Federal Government would construct, operate, and maintain the facilities.

3. Summary of Environmental Impacts: The proposed action would commit a total of approximately 55 acres of land to right-of-way expansion. Forty-five acres of forest cover would be removed from production, representing an estimated annual loss of 30 cords of timber growth. The equivalent annual stumpage value is \$465.00; the resultant tax loss is \$46.00.

One residence west of the Webster Substation may have to be relocated. The route will cross approximately 5 acres of agricultural land.

A total of 51 streams and 13 wetlands may be affected by increased sedimentation during the construction phase. Ledges exhibiting potential rare plant habitat qualities are crossed at a number of points along 11 miles of the proposed route. Of special concern is a peregrine falcon reintroduction site near the northwestern route corridor which could be adversely impacted by the facility.

Numerous linear recreational resources are crossed by the proposed route. Most significant among these is the crossing of the Appalachian Trail and of its proposed relocation in the vicinity of Lake Tarleton and Mt. Mist. Rivers crossed include the Ammonoosuc, the Smith, and the South Branch of the Baker River, all designated potential State Recreational or Scenic Rivers. Five highways crossed are designated fall-foliage, scenic, sightseeing, and/or bicycle routes. The proposed route also traverses nearly 9 miles of the White Mountain National Forest and its Proclamation Area, but within an existing right-of-way.

The proposed 165-foot high double-circuit steel towers will have high visual impacts on residential, scenic, and recreational resources along 6.5 miles of the proposed route in the vicinity of the Moore and Comerford Reservoirs. Some visual impact will occur in the vicinity of Boston Hill and along the eastern slope of Flag Pole Hill near the Webster Substation.

A direct impact on the remains of an old stone foundation wall, a potential archeological site which lies along the centerline just west of Wentworth, can be avoided by proper location of the line structures.

4. Alternatives Considered:

- a. Alternative of not building the transmission lines
- b. Alternative of use of existing transmission system
- c. Alternative transmission routes
- d. Alternative types of tower and reconductoring

5. Scope of Final Supplement: This Final Supplement EIS consists entirely of Section 9 (Consultation and Coordination), which incorporates public and agency comments on the Draft Supplement EIS and responses to those comments, as well as all necessary errata and addenda to the Draft Supplement.

Dickey-Lincoln School Lakes Trans. Project FSEIS  
Wgl723P:03-09-81

TABLE OF CONTENTS

	<u>Page</u>
Summary	
<u>Section</u>	<u>i</u>
9.0 CONSULTATION AND COORDINATION.....	1
9.01 Consultation and Coordination During Preparation of the DSEIS.....	1
9.01.1 Contacts.....	2
9.02 Coordination in Review of the DSEIS.....	8
9.02.1 Comments Requested.....	8
9.02.2 Availability for Public Comment and Response.....	12
9.02.3 Public Meetings.....	15
9.02.4 Review Procedures for Comment.....	15
9.03 Comment Responses.....	16
9.03.1 Individuals Testifying at Public Meetings.....	16
9.03.2 Comment Letters Received.....	16
9.03.3 DOE Comment Response Assumption.....	17
9.03.4 Comments and Responses.....	17
9.03.5 Addenda and Errata.....	30
9.04 Appendices.....	31

9.0 CONSULTATION AND COORDINATION

9.01 Consultation and Coordination During Preparation of the DSEIS

The Department of Energy, in developing the scope of work for the Dickey-Lincoln School Lakes Transmission Study, recognized the need for a great deal of consultation and coordination. Consultation, coordination, and public involvement were integral parts of the study design. Furthermore, a consultant's location and experience in northern New England were important factors in choosing consultants for the study.

The System Planning Study (Appendix A to the Supplement) was accomplished with cooperation by the electric utilities of the region. NEPLAN, the planning arm of the New England Power Pool, played a major role in these studies.

During the regional corridor study phase (part of the initial transmission EIS effort) coordination with agencies and groups with regional responsibility was emphasized. Contacts were established early with Federal and State agencies and regional planning commissions and utilities, major paper and land management companies, and environmental groups. Many meetings and discussions were held with representatives of these agencies and groups.

In the spirit of "open planning and scoping" and to solicit additional input directly from the people of the region, public information meetings were held in June 1976, at Presque Isle, Bangor, and Augusta, Maine; Concord and Berlin, New Hampshire; and Montpelier, Vermont. In December 1976, with the corridor study complete, another series of public meetings was held, this time in Presque Isle, Jackman, Bangor, and Augusta, Maine; Concord and Groveton, New Hampshire; and Montpelier, Vermont.

At the earlier planning meetings, the discussion focused on all corridor possibilities that could reasonably be considered as locations for transmission facilities. While the results of the initial study did not indicate need for the facility to extend to the Webster Substation at the authorized level of generation, the ultimate level did include transmission to the Beebe-Webster area. Thus, the open meetings to define issues and review corridors did present to the people of central New Hampshire the possibility of future transmission requirements now considered as part of the requirements for the authorized level of transmission.

DOE has held discussions with towns along the alternative routes. Working with the Regional Planning Commissions, DOE staff members arranged to attend Planning Commission meetings to present the study and to solicit information and opinions from planners, selectmen, and town representatives. Several towns were represented at each meeting. These meetings were held in Lincoln (North County Council) and Meredith (Lakes Region Planning Commission).

Individual property owners were not contacted during this study. If the project is approved and funded for construction, landowners along the proposed route will be consulted during actual right-of-way and structure location.

Throughout the project much coordination took place between the Department's study team and the U.S. Army Corps of Engineers, responsible for studies relating to the dam and reservoir. Staff members also worked closely with the U.S. Fish and Wildlife Service which has project responsibilities under the Fish and Wildlife Coordination Act. Staff members briefed a number of state agencies regarding this supplemental study.

Agencies, groups, and individuals who were in contact with Department's study team, and with whom some degree of consultation or coordination took place, are listed as follows.

9.01.1            Contacts

ENVIRONMENTAL GROUPS

Natural Resources Council	Augusta, Maine
Sunkhaze Chapter of Trout Unlimited	Bangor, Maine
National Wildlife Federation	Bar Harbor, Maine
Sportman's Alliance	Gardiner, Maine
The Maine Association of Conservation Commissions	Kennebunkport, Maine
Maine Audubon Society	Portland, Maine
Land Use Foundation of New Hampshire	Concord, New Hampshire
New Hampshire Association of Conservation Commissions	Concord, New Hampshire
Society for Protection of New Hampshire Forests <u>1/</u>	Concord, New Hampshire
Statewide Program to Conserve Our Environment	Concord, New Hampshire
Nature Conservancy	Durham, New Hampshire
New Hampshire Wildlife Federation	Manchester, New Hampshire
The Loon Preservation Committee <u>1/</u>	Meredith, New Hampshire
Vermont Natural Resources Council	Montpelier, Vermont
Conservation Society of Vermont	Townsend, Vermont
Appalachian Mountain Club <u>1/</u>	Boston, Massachusetts
Appalachian Mountain Club <u>1/</u>	Gorham, New Hampshire
Friends of the St. John <u>1/</u>	Boston, Massachusetts

1/ Contacts established during the supplemental study.

PLANNING COMMISSIONS

Androscoggin Valley Regional Planning Commission	Auburn, Maine
South Kennebec Valley Regional Planning Commission	
Penobscot Valley Regional Planning Commission	Augusta, Maine
Northern Maine Regional Planning Commission	Bangor, Maine
Eastern Mid-Coast Regional Planning Commission	Caribou, Maine
Southern Maine Regional Planning Commission	Rockland, Maine
North Kennebec Regional Planning Commission	Sanford, Maine
North Country Council, Inc. <u>1/</u>	Winslow, Maine
Upper Valley-Lake Sunapee Council <u>1/</u>	Franconia, New Hampshire
Lakes Region Planning Commission <u>1/</u>	Lebanon, New Hampshire
Central New Hampshire Regional Planning Commission	Meredith, New Hampshire
Chittenden County Regional Planning Commission	Bow, New Hampshire
Central Vermont Regional Planning Commission	Essex Junction, Vermont
Southern Windsor Regional Planning Commission	Montpelier, Vermont
Northeastern Vermont Development Association	Springfield, Vermont
	St. Johnsbury, Vermont

STATE AGENCIES

Maine

Department of Inland Fisheries and Wildlife	Augusta, Maine
Department of Forestry	Augusta, Maine
Department of Inland Fisheries and Wildlife	Bangor, Maine
Land Use Regulation Commission (LURC)	Augusta, Maine
Department of Conservation	Augusta, Maine
Maine Bureau of Geology	Augusta, Maine
Department of Parks and Recreation	Augusta, Maine
Department of Agriculture, Soil and Water Conservation Commission	Augusta, Maine
State Geologist	Augusta, Maine
State Planning Office	Augusta, Maine
State Historic Preservation Office	Augusta, Maine

New Hampshire

Department of Resources and Economic Development <u>1/</u>	Concord, New Hampshire
Bureau of Off Highway Vehicles	Concord, New Hampshire

1/ Contacts established during the supplemental study.

Division of Economic Development	Concord, New Hampshire
Division of Forests and Lands	Concord, New Hampshire
Division of Parks and Recreation	Concord, New Hampshire
State Historic Preservation Office	Concord, New Hampshire
Fish and Game Department <u>1/</u>	Concord, New Hampshire
Water Resources Board <u>1/</u>	Concord, New Hampshire
Coordinator of Federal Funds <u>1/</u>	Concord, New Hampshire
Department of Energy	Concord, New Hampshire
Office of State Planning <u>1/</u>	Concord, New Hampshire
State Geologist <u>1/</u>	Concord, New Hampshire
Department of Public Works and Highways <u>1/</u>	Concord, New Hampshire
Water Supply and Pollution Control Commission <u>1/</u>	Concord, New Hampshire

Vermont

Division of Historic Preservation	Montpelier, Vermont
Department of Forest and Parks	Montpelier, Vermont
Environmental Conservation Agency	Montpelier, Vermont
Department of Fish and Game	Montpelier, Vermont
Planning Board	Stowe, Vermont
Public Service Board	Montpelier, Vermont
State Planning Office	Montpelier, Vermont
Vermont Water Resources Department	Montpelier, Vermont

FEDERAL AGENCIES

Department of Justice

U.S. Attorney's Office	Bangor, Maine
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Department of the Interior

U.S. Fish and Wildlife Service <u>1/</u>	Concord, New Hampshire
U.S. Department of the Interior	
Office of Environmental Project Review	Washington, D. C.
U.S. Geological Survey	Concord, New Hampshire
National Park Service <u>1/</u>	Boston, Massachusetts
Inter-Agency Archeological Service	
National Park Service	Atlanta, Georgia
Heritage Conservation and Recreation Service <u>1/</u>	Philadelphia, Pennsylvania

1/ Contacts established during the supplemental study.

Department of Agriculture

Soil Conservation Service 1/  
Forest Experiment Station  
University of Maine 1/  
Forest Service Eastern Region 1/  
White Mountain National Forest

Durham, New Hampshire  
Grafton Co., New Hampshire  
Orono, Maine

Laconia, New Hampshire

UTILITIES

Carrabasset Light & Power  
Central Maine Power Company  
Union River Electric Corp.  
Bangor Hydroelectric Co.  
Eastern Maine Electric Corp.  
Maine Public Service  
Granite State Electric Co.  
Littleton Water & Light  
Public Service Co. of New Hampshire 1/  
New Hampshire Electric Corp.  
Public Utilities Commission 1/  
Village, Inc.  
Green Mountain Power Corp.  
Light Commission  
Village of Hyde Park, Inc.  
Vermont Electric Corp.  
Electric Light Department  
Electric Plant  
Washington Electric Corp., Inc.  
Municipal Electric Association,  
Morrisville Water & Light  
Citizens Utilities Co.  
Light Commission  
Allied Power & Light Co.  
Vermont Marble Co.  
Rochester Electric Light & Power  
Connecticut Valley Electric Co.  
Vermont Electric Power Co.  
Light Commission  
Northeast Public Power Association  
Massachusetts Municipal Wholesale  
Electric Co.  
NEPLAN 1/  
Northeast Utilities  
Stony Brook Energy Center  
New England Power Service Company 1/

North Anson, Maine  
Augusta, Maine  
Aurora, Maine  
Bangor, Maine  
Calais, Maine  
Presque Isle, Maine  
Lebanon, New Hampshire  
Littleton, New Hampshire  
Manchester, New Hampshire  
Plymouth, New Hampshire  
Concord, New Hampshire  
Barton, Vermont  
Burlington, Vermont  
Hardwick, Vermont  
Hyde Park, Vermont  
Johnson, Vermont  
Ludlow, Vermont  
Lyndonville, Vermont  
E. Montpelier, Vermont

Morrisville, Vermont  
Newport, Vermont  
Northfield, Vermont  
Pittsford, Vermont  
Proctor, Vermont  
Rochester, Vermont  
Rutland, Vermont  
Rutland, Vermont  
Stowe, Vermont  
Littleton, Massachusetts

Ludlow, Massachusetts  
W. Springfield, Mass.  
W. Springfield, Mass.  
Westover, Mass.  
Westborough, Mass.

1/ Contacts established during the supplemental study.

UNIVERSITIES

Cooperative Extension Service, University  
of Maine  
Department of Anthropology, University  
of Maine  
Dartmouth Outing Club, 1/  
Dartmouth College  
Plymouth State College 1/

Bangor, Maine  
Orono, Maine  
Hanover, New Hampshire  
Plymouth, New Hampshire

TIMBER COMPANIES

Boise Cascade Corp.  
Brown Paper Company  
Dead River Company  
Diamond International Corp.  
Dunn Heirs  
Georgia Pacific Corp.  
Great Northern Paper Co.  
James W. Sewall Co.  
J. M. Huber Corp.  
Maine Woodlands International Paper Co.  
North Maine Woods  
St. Regis Paper Co.  
Scott Paper Company  
Seven Islands Land Company

Rumford, Maine  
Berlin, New Hampshire  
Bangor, Maine  
Old Town, Maine  
Ashland, Maine  
Woodland, Maine  
Millinocket, Maine  
Old Town, Maine  
Old Town, Maine  
Jay, Maine  
Presque Isle, Maine  
Bucksport, Maine  
Winslow, Maine  
Bangor, Maine

OTHER CONTACTS

Citizens Advisory Committee for the  
Governor of Maine  
Jackman Planning Board  
Kennebago Camp Owners Association  
League of Women Voters of Maine  
Berlin, Town of (Community Development  
Director) Berlin, New Hampshire  
International Generation and Transmission  
Company, Inc.  
Walkers Pond Water Conservation Society  
New Hampshire  
Dartmouth-Lake Sunapee Region Assoc. 1/  
New Hampshire Campground Owners Assoc.  
New Hampshire Good Roads Association 1/  
New Hampshire Municipal Association

Farmington, Maine  
Jackman, Maine  
Oguossoc, Maine  
Winthrop, Maine

Berlin, New Hampshire  
Conway Center,

Lebanon, New Hampshire  
Meredith, New Hampshire  
Concord, New Hampshire  
Concord, New Hampshire

1/ Contacts established during the supplemental study.

Dickey-Lincoln School Lakes Trans. Project FSEIS  
Wg1723P:03-09-81

The Lakes Region Association 1/  
Lincoln, Town of 1/  
Andover, Town of 1/  
Bristol, Town of 1/  
Thorton, Town of 1/  
Woodstock, Town of 1/  
Rumney, Town of 1/  
Franklin, Town of 1/  
Barnet, Town of 1/  
Plainfield, Town of  
Peacham, Town of  
Tenneco, Inc.  
Social Assessment Services

Wolfboro, New Hampshire  
Lincoln, New Hampshire  
Andover, New Hampshire  
Bristol, New Hampshire  
Thorton, New Hampshire  
Woodstock, New Hampshire  
Rumney, New Hampshire  
Franklin, New Hampshire  
Barnet, Vermont  
Plainfield, Vermont  
Peacham, Vermont  
Hopkinton, Massachusetts  
Sudbury, Massachusetts

1/ Contacts established during the supplemental study.

9.02 Coordination in Review of the DSEIS

9.02.1 Comments Requested

Comments on the Draft Supplement EIS were requested from:

Advisory Council on Historic Preservation  
Department of Agriculture  
Department of Commerce  
Department of Defense  
Department of Health and Human Services  
Department of Housing & Urban Development  
Department of Interior  
Department of State  
Department of Transportation  
Environmental Protection Agency  
Federal Energy Regulatory Commission,  
Inland Water Directorate, Environment Canada  
Interstate Commerce Commission  
U.S. Army Corps of Engineers, New England Division  
U.S. Forest Service, White Mountain National Forest  
U.S. Geological Survey

Maine State Clearinghouse Coordinator, A-95  
New Hampshire Coordinator of Federal Funds  
Vermont State A-95 Coordinator  
Massachusetts A-95 Coordinator, Boston, MA.

NOTE: The above State A-95 Clearinghouses forward requests for  
comments to all appropriate State Offices and coordinate State  
agency review of Draft EIS.

Maine State Historic Preservation Commission  
New Hampshire Division of Historic Preservation  
Vermont Division of Historic Preservation

Androscoggin Regional Planning Commission, ME.  
North Kennebec Regional Planning Commission, ME.  
Northern Maine Regional Planning Commission, ME.  
Penobscot Valley Regional Planning Commission, ME.  
North Country Council, NH.  
Lakes Region Planning Commission  
Central New Hampshire Regional Planning Commission  
Central Vermont Planning Commission, VT.  
Chittenden County Regional Planning Commission, VT.  
Northeast Vermont Development Association, VT.

Dickey-Lincoln School Lakes Trans. Project FSEIS  
Wg1723P:03-09-81

NOTE: The Regional Planning Commissions above act as area-wide A-95 Coordinators. As such, they forward requests for comments to appropriate towns and local agencies and coordinate Draft EIS review. All organized towns along the alternative routes are included in this review process.

Boise Cascade Corp., Rumford, ME.  
Brown Paper Company, Berlin, NH.  
Dead River Company, Bangor, ME.  
Diamond International Corp., Old Town, ME.  
Dunn Heirs, Ashland, ME.  
G. Pierce Webber, Bangor, ME.  
Georgia Pacific Corp., Woodland, ME.  
Great Northern Paper Co., Millinocket, ME.  
J.M. Huber Corp., Old Town, ME.  
International Paper Co., Jay, ME.  
St. Regis Paper Co., Bucksport, ME.  
Scott Paper Co., Winslow, ME.  
Seven Islands Land Co., Bangor, ME.  
James W. Sewall Company, Old Town, ME.

Associated General Contractors of Maine

Business & Industry Association of New Hampshire  
Carpenter's Local 621, Brewer, ME.  
Economic Resources Council, ME.  
Industrial Development Council of Maine  
International Brotherhood of Electrical Workers, MA.  
Maine AFL-CIO  
Maine Electric Cooperative Association  
Maine Citizens for Dickey-Lincoln  
Maine State Chamber of Commerce, Portland, ME.  
Valley Residents Against Dickey-Lincoln, Ft. Kent, ME.  
Vermont State Chamber of Commerce

American Rivers Conservation Council, D.C.

Maine Association of Conservation Commissions  
Maine Forest Products Council, ME.  
Massachusetts Division of Water Pollution Control  
New England Governor's Conference, MA.  
New England Regional Commission, MA.  
New England River Basins Commission, MA.  
Federal Regional Council of New England  
New Hampshire Association of Conservation Commissions  
Office of Legislative Research, Hartford, CT.  
Society of American Foresters, ME.

American Association of University Women, ME.  
Audubon Society of Maine  
Audubon Society of New Hampshire  
Appalachian Mountain Club, MA.  
Appalachian Mountain Club, NH.  
Bates Outing Club, ME.  
Colby Environmental Council, ME.  
Northwestern University Center for Urban Affairs  
Connecticut River Watershed Council  
Conservation Law Foundation of New England, MA.  
Conservation Society of Vermont  
Dartmouth College, Hanover, NH.  
Environmental Defense Fund  
Dartmouth Outing Club, NH.  
Environmental Coalition  
Friends of the St. John, MA.  
Friends of the Earth  
Forum on New Hampshire Future  
Institute of Natural and Environmental Resources,  
University of New Hampshire, Durham, NH.  
Izaak Walton League of America  
Garden Club Federation, ME.  
Grafton County Soil Conservation District

Green Mountain Club, VT.  
Harvard Environmental Law Society  
Land Use Foundation of New Hampshire  
Land & Waters Resources Institute, UM-Orono, ME.  
League of Women Voters, ME.  
Maine Public Interest Research Group  
Maine Association of Planners  
Maine Archeological Society  
Legislative Utility Conservation Council  
Midcoast Audubon Society, ME.  
National Audubon Society, Inc., Washington, D.C.  
National Wildlife Federation, Washington, D.C.  
Nature Conservancy, MA.  
Nature Conservancy, NH.  
National Parks and Conservation Association  
Natural Resources Council of Maine  
Natural Resources Council of Vermont  
New England Forestry Foundation, Inc.  
New Hampshire Farm Bureau  
New Hampshire Snowmobiling Association  
New Hampshire Planner's Association  
New England Natural Resources Center, MA.  
New Hampshire Wildlife Federation, NH.  
Penobscot Paddle & Chowder Society, ME.

Sierra Club, MA.  
Simon's Rock Early College, ME.  
Society for Protection of New Hampshire Forests  
SPACE: Statewide Program to Conserve Our Environment, NH.  
Sportsman Alliance, Gardiner, ME.  
Sunkhaze Chapter of Trout Unlimited, Bangor, ME.  
The Association of Aroostook Indians, Inc.  
Timberland Owners Association  
United Fly Tyers, Inc.  
Unity College, ME.  
Wildlife Management Institute

Bangor Hydroelectric Company  
Boston Edison Company, MA.  
Central Maine Power Company  
Eastern Maine Electric Coop.  
Eastern Utilities Associates Service Corporation, MA.  
Fitchburg Gas and Electric Light Co., MA.  
Green Mountain Power Corp., VT.  
Maine Public Service Company  
Massachusetts Municipal Wholesale Electric Company, MA.  
Municipal Electric Association of Vermont  
New England Electric Gas and Electric Associates, MA.  
New England Electric Service, MA. (NEES)  
New England Power Company  
New England Power Planning, MA.  
New Hampshire Electric Cooperative  
Newport Electric Corporation, RI.  
Northeast Public Power Association, MA.  
Northeast Utilities Service Co., CT. (NESCO)  
Public Service Co. of New Hampshire  
United Illuminating Company, New Haven, CT. (EUA)  
Vermont Electric Power Company  
Debouoise and Liberman  
Mr. Charles Dibner  
Mr. Frank Christ  
Maine Public Service Company, ME.  
Chas. T. Main, Inc.  
Mr. and Mrs. Brian Pinette

9.02.2 Availability for Public Comment and Response

The Notice of Availability of the Draft Supplement, including announcement of a 45-day public review and comment period, was published in the Federal Register, September 24, 1981, p. 63328. The Draft Supplement EIS was filed with the Environmental Protection Agency on October 1, 1980. Revised announcement of public meetings in the area appeared in the Federal Register on October 30, 1980, p. 71842.

After publication of the Notice of Availability, over 800 copies of the Draft Supplement EIS were mailed to Federal, state, and local government agencies, to non-governmental groups, and to interested individuals. All supporting appendices were made available to those asked to comment on the Draft.

Copies of the statement and appendices were made available to the public at the following repositories:

REPOSITORIES

Connecticut

Hartford  
Storrs

State Library  
University of Connecticut

Maine

Allagash  
Ashland  
Auburn  
Augusta  
Augusta  
Bangor

Town Hall  
Town Council  
Androscoggin Regional Planning Commission  
Natural Resources Council  
State House Law and Legislative Library  
Department of Energy - Federal Office  
Building

Bangor  
Bangor  
Biddeford  
Brunswick  
Caribou  
Castine

Penobscot Valley Regional Planning Commission  
Public Library  
McArthur Public Library  
Bowdoin College - Longfellow Library  
Northern Maine Regional Planning Commission  
Maine Maritime Academy - Nutting Memorial

Farmington  
Fort Kent  
Fort Kent  
Jackman  
Lewiston  
Machias  
Madawaska  
Orono

Library  
University of Maine  
Chamber of Commerce  
University of Maine  
Town Hall  
Bates College  
University of Maine - Merrill Library  
First Selectman  
University of Maine - Raymond H. Fogle  
Library

Portland	Portland Public Library
Portland	University of Maine - Documents Department
Portland	University of Maine - Law Library
Portland	University of Maine - Acquisitions Librarian
Portland	University of Maine - Center of Research - Advanced Study
Presque Isle	University of Maine
Springvale	Nasson College - Anderson Learning Center Library
St. Francis	First Selectman
Unity Unity College	
Waterville	Colby College - Miller Library
Waterville	Public Library
Winslow	North Kennebec Regional Planning Commission

Massachusetts

Amherst	University of Massachusetts
Boston	Boston Public Library
Boston	Department of Energy
Boston	State Library - Fingold Library
Cambridge	Harvard Graduate School of Design - Gund Hall
Cambridge	Harvard - Widener Library
Cambridge	Massachusetts Institute of Technology
Chestnut Hill	Boston College - Babst Library
Lowell	University of Lowell - Alumni Memorial Library
Waltham	Brandeis University - Goldfarb Library
Waltham	U.S. Army Corps of Engineers
Worcester	Worcester Polytechnical Institute - Gordon Library

New Hampshire

Bow	Central New Hampshire Regional Planning Commission
Concord	State Library
Durham	University of New Hampshire - Ezekiel W. Dimond Library
Franklin	Public Library
Franconia	North Country Council
Groveton	Public Library
Hanover	Dartmouth College - Baker Library
Hudson	Hills Memorial Library
Laconia	White Mountain National Forest
Laconia	City Library
Littleton	City Library
Manchester	City Library
Meredith	Lakes Region Planning Committee
Plymouth	Plymouth State College

Dickey-Lincoln School Lakes Trans. Project FSEIS  
Wg1723P:03-09-81

Rhode Island

Kingston  
Providence  
Providence

University of Rhode Island  
Brown University  
State Library

Vermont

Burlington  
  
Essex Junction  
  
Montpelier  
Montpelier  
South Royalton  
St. Johnsbury  
St. Johnsbury

University of Vermont -  
Guy W. Bailey Memorial Library  
Chittenden County Regional Planning  
Commission  
State Library  
Vermont Free Library  
Vermont Law School  
Northeast Vermont Development Association  
St. Johnsbury Athenaeum

### 9.02.3 Public Meetings

DOE held two public meetings in mid-November 1980 to afford the public an opportunity to comment and ask questions. The DOE team also sought comments on the work done and decisions reached related to the supplemental work to the transmission facilities proposal for the total project. The Dickey-Lincoln School Transmission Team Project Manager presided over the meetings, which were recorded verbatim by a professional court recorder.

The meetings were announced in the Federal Register notice of October 1980, through paid announcements to eight newspapers throughout the area, and by direct notice sent to all groups and individuals on the Dickey-Lincoln mailing list.

The meeting locations, dates, attendance, and the number of people giving testimony are as follows:

<u>Place</u>	<u>Date and Time</u>	<u>Attendance</u>	<u>Number Testifying</u>
Littleton, N.H.	November 12 7:30	7	4
Plymouth, N.H.	November 13 7:30	16	9

### 9.02.4 Review Procedures for Comment

To be considered in preparation of the Final EIS, comments had to be made at public meetings or submitted in writing and received by the Assistant Project Manager for Environmental Studies, in Portland, Oregon, by the close of the announced 45-day review period.

All comment letters received were carefully considered. Comments of consequence related to the Draft EIS were used in revising the text or were responded to individually. To qualify as consequential, a comment basically had to present new data or information, to question facts and/or contexts of analyses performed, or to review or raise general questions on alternatives or overall environmental effects.

All letters and comments received at public meetings were reviewed. Individual portion(s) thereof identified as specific comments were identified by comment numbers. Comments were then assigned to DOE personnel or to contractors for response and/or for suggested wording changes in the Final EIS.

9.03 Comment Responses

9.03.1 Individuals Speaking at Public Meetings

<u>Speakers</u>	<u>Representing</u>	<u>Location</u>
1. Alan R. Semple, Jr.	Self	Littleton, NH
2. Ray Lobdell	North Country Council	Littleton, NH
3. Fred T. Daft	Self	Littleton, NH
4. M. E. Kay	New England Power	Littleton, NH
5. Charles E. Swanson	New Hampshire	Plymouth, MA
6. Robert Michenfelder	Connecticut River Watershed Council	Plymouth, MA
7. George R. Gautz	New Hampshire Governors Council on Energy	Plymouth, MA
8. Ken Sutherland	Self	Plymouth, MA
9. John P. Chandler	Hill Planning Board	Plymouth, MA
10. Peter Estabrooks	Recreational Trails Society	Plymouth, MA
11. Charles Valins	New Hampshire Snowmobile Association	Plymouth, MA
12. John Kurt	Self	Plymouth, MA
13. Ralph Kirshner	Self	Plymouth, MA

9.03.2 Comment Letters Received

1. Tennessee Valley Authority
2. U.S. Department of Housing and Urban Development
3. U.S. Nuclear Regulatory Commission
4. Northern Maine Regional Planning Commission
5. Robert O. Linck
6. U.S. Department of Transportation - Federal Highway Administration
7. Northeast Public Power Association
8. New England Power Service Company
9. North Country Council, Inc.
10. U.S. Department of Agriculture - Soil Conservation Service
11. U.S. Department of Energy
12. U.S. Department of Commerce - NOAA
13. New Hampshire Snowmobile Association, Inc.
14. State of Vermont
15. U.S. Environmental Protection Agency
16. U.S. Department of Transportation - Federal Aviation Administration
17. U.S. Department of Agriculture - Forest Service
18. Federal Energy Regulatory Commission
19. U.S. Department of Interior
20. State of New Hampshire

### 9.03.3 DOE Comment Response Assumption

Consideration of the environmental impacts of construction, operation, and maintenance of supplemental transmission facilities for the Dickey-Lincoln School Lakes Project and preparation of an Environmental Impact Statement for the project and transmission facilities results from the requirements of the National Environmental Policy Act of 1969. This act requires such actions when a Federal agency proposes a "significant action." Studies for the transmission facilities were also made with the requirements of the Fish and Wildlife Coordination Act in mind. The results comply with the requirements of both statutes.

The contents of the Department of Energy (DOE) documents relating to the project will apply if:

1. The decision is made to construct the project; and
2. Subsequent discussion and negotiation with the existing utilities results in the decision that DOE will construct the transmission facilities.

There are several possible variations on Item 2 above. Other utilities in the region could build all the transmission facilities and "wheel" (transmit to market) the power for DOE. It is also possible that some of the facilities could be built by DOE and the remainder by the utilities.

If DOE builds the transmission facilities, it may contract maintenance work to local utilities, or it could do the work with its own staff. In either case, DOE could specify the governing criteria of maintenance plans for the right-of-way.

If the facilities are constructed by the utilities in the area, those utilities would set maintenance standards for them.

The responses to the comments received are based on the assumption that the DOE will construct, operate, and maintain the transmission facilities.

### 9.03.4 Comments and Responses

Responses are made to all substantial comments (see 9.02.4).

#### 1. COMMENT BY: Robert O. Linck

Of the impacts of the proposed action, I would like to voice my concern over two of them in particular. First, the potential effects on the 51 streams and 13 wetlands represent another example of how we continue to chip away on the productivity and diversity of our aquatic ecosystems. Herbicide runoff and

sedimentation, and their resultant effects on such bodies of water as French Pond and the Baker River, should not be written off as minor or insignificant. Our water resources are becoming more limited by the day as it is.

RESPONSE:

Factors related to herbicide runoff and sedimentation, water temperature and quality, and other related issues were considered when developing impact predictions for streams, lakes, and wetlands. Those impacts are shown in table 3.06-1 (Aquatic Ecosystems Impact) on page 42 of the Draft Supplement EIS. Both section 3.06 of the DEIS and Appendix B indicate that French Pond and Baker River are seen as being of special concern because of waterfowl habitat and salmon fishery.

2. COMMENT BY: Robert O. Linck

A second matter of concern involves threatened species such as the peregrine falcon and the silverling (a rare plant found in New Hampshire, Maine, and Massachusetts). I see no mention in the EIS of mitigation measures which would protect the falcon reintroduction site near the northwestern route corridor, and likewise, there is not much space devoted to threatened plant species such as the silverling.

RESPONSE:

Appendix B, pp. 7 and 45, includes an extensive discussion of the wildlife and related impacts on Link 81, which would pass within 1 mile of the "critical habitat" of the reintroduction site.

Mr. R. Bolengier (U.S. Fish and Wildlife Service) was consulted on potential impacts of the facility on the falcon reintroduction site. The results of this assessment indicate that the peregrine could be adversely affected by herbicides, but could benefit from increased prey associated with forest successional changes introduced by the right-of-way. The opinion of the U.S. Fish and Wildlife Service and of the wildlife biologists under contract to DOE is that it is unlikely that there will be any significant impact on the falcon.

Mitigation established would include prohibiting herbicide application near that portion of the facility that could have any adverse impact on the falcon, and prohibiting certain construction activities in the immediate area from May through mid-June, during breeding season.

Because of the uncertainty related to the construction of the project, formal consultation has not been initiated. If the project is funded for construction, DOE will complete the consultation requirements as required by the Endangered Species Act.

The potential for impact on threatened plant species has been investigated for this supplemental effort as well as in the studies for the overall transmission project. Appendix E (Ecological Resource Study) to the 1978 DEIS includes lists of potential threatened species for the New England area. This list was carefully evaluated during preparation of the Supplement, and consultation with leading rare plant authorities was undertaken in the New Hampshire area. The Silverling is not present in the area that would be affected by the transmission facilities.

3. COMMENT BY: New England Power Service

Figures 1.03-2 (Section 1) and 3 (Appendix D) showing the cross section of the 230 kV right of way are classified as "Proposed Facility." These diagrams definitely create an image for the ultimate appearance of the transmission corridor. We believe that, although the text on page 20 leaves room for flexibility in a final decision, the right of way cross-section sketches are definitely prejudicial. Therefore, we request that you remove these figures from the report.

If the removal of the figures detracts too much from the report to be acceptable to you, then it should be made clear, at least on Figure 1.03-2, that this proposal is only one of at least two possible routes, and that a final decision has not been made. This information should appear on Figure 1.03-2, as well as in the text.

RESPONSE:

The changes will appear on Figure 1.03-2 (see 9.03.5 Addenda and Errata).

4. COMMENT BY: New England Power Service

Additionally, for the reliability of the New England transmission system, it may not be advisable to use this single transmission corridor for integrating all contemplated northern New England generating capacity into the New England system. For that reason, the second alternate route should be kept open and considered before any construction decisions are made. The second alternate route is slightly more economical and is ranked close to the proposed plan. We request that some reference to this concept be made in the text.

RESPONSE:

The overall system reliability will be reviewed with NEPLAN before construction plans are finalized. All alternate routes will be "kept open" pending construction authorization and subsequent discussions with New England Power Service, as discussed on page 20 of the Draft Supplement EIS.

5. COMMENT BY: New England Power Service

Page 5: "New England Electric Service, MA. (NEES)" should be "New England Electric System."

RESPONSE:

Change has been made in the text (see 9.03.5 Addenda and Errata).

6. COMMENT BY: New England Power Service

Page 21, Section 1.03.3 Design Criteria and Figure 1.03.3.

NEP believes that the visual intrusion created by 165 foot high double-circuit lattice type steel structures between Moore and Comerford substations is excessive. Proposed lattice type steel towers rising more than twice as high as the existing 75 foot high wood pole arm structures near a state highway and in the river valley is more than a mere "intrusion." This is a heavily traveled area as compared with the proposed right-of-way from Dickey to the Connecticut River Valley.

RESPONSE:

The Visual-Recreation Impact Study, Appendix I, considered in detail the visual impacts of all alternatives, including the proposed steel lattice towers between Moore and Comerford substations. Pages B-7 and B-11 cover in detail the visual and recreational impacts on a mile-by-mile basis of link 42F. Section 3.13.1 (p. 49 of the DSEIS) states that higher double-circuit steel towers along parts of link 42F will have significant impact on viewers. Both sections of the document refer to significant or high impacts.

If the project is funded for construction, DOE will prepare more detailed location plans, and consideration of mitigation techniques in high impact areas will be explored. One such technique is to lower visual impacts by using 2 wood-pole lines instead of the taller double-circuit steel towers (see "Swift Diamond Alternative" in the Supplement to Draft EIS on Dickey-Lincoln School Lakes, published by Army Corps of Engineers, September 1978, pp. 21-30).

7. COMMENT BY: New England Power Service

Appendix J - Historical-Archeological Impact Study, Page 2

"Recommendations

1. We recommend a full and intensive archeological survey of the final right of way."

NEP questions whether "a full and intensive archaeological survey" would include sampling. NEP believes that sampling should only be conducted at those proposed tower locations which are deemed to be sites of possible archaeological value, not across the full width and length of the final right of way. On Page 21 of the Draft EIS Supplement, Section 103.4 Construction Sequence, it states "Where the right of way is already cleared, certain steps such as access road construction ... will not be required." As all of the NEP right of way is already cleared, no access road construction would be necessary; therefore, no archaeological survey relative to access roads would be necessary for these links. As the actual sites of excavation for the proposed towers will occupy an infinitesimal portion of the total area, it is only at these sites, if of archaeological value, that sampling should be conducted. The taxpayers of the United States should not have to pay for sampling in the approximately 99% of the right of way which are not to be tower locations. A full and intensive field survey could adequately document sites of probable archaeological value not to be impacted by the proposed towers and file this data with the State Archaeologist. In this manner the convenience, the contextual relationships of any surviving artifacts on the existing right of way would be preserved. NEP believes that "in-situ" preservation is superior to excavation and removal, and a more economical path to pursue.

RESPONSE:

DOE agrees. If the project is funded for construction, DOE will conduct an extensive cultural resource survey over those areas where an impact could occur from the construction, maintenance, or operation of the facility. This survey would follow prescribed guidelines and would be undertaken by qualified archeologists in cooperation with the State Historic Preservation Offices. Typically, it is assumed that impacts could occur anywhere within the ROW during construction or maintenance phases; thus, the survey would include all of the ROW. If, however, potential sites should be discovered, it is DOE policy to use all practicable means to avoid affecting these sites during construction, operation, and maintenance. Only the site that cannot be avoided would be further evaluated in cooperation with appropriate state and Federal agencies. DOE also maintains that "in-situ" preservation is appropriate where possible.

8. COMMENT BY: New England Power Service

Appendix J - Historical-Archeological Impact Study, Page 13

In the penultimate paragraph, mention is made of "a policy of the PAF (Public Archaeology Facility) not to enter private property without owner permission." NEP expects that permission will be requested prior to entry by the PAF or any other organization conducting any further surveys.

RESPONSE:

DOE or any of its contractors would coordinate with New England Power Service and would obtain permission from all landowners before undertaking an intensive archeological survey.

9. COMMENT BY: North Country Council, Inc.

My one question concerns the status of the proposed power lines with regard to local property taxation. It is my understanding that the proposed lines would be tax exempt and that if the lines were run on existing New England Power Company's towers those would also become exempt. Some of our committees are concerned about the impact these exemptions could have on their tax base. For example, Haverhill's largest existing taxpayer is currently the New England Power Company.

I believe that your EIS does not adequately address this issue and our Land Use Planning Advisory Committee would like to have some additional information regarding this subject.

RESPONSE:

The proposed line would run on existing New England Power Company right-of-way (pending successful negotiation of agreements), but would not share New England Power towers. Federally-owned facilities built for this project could not be taxed. The land in the right-of-way, however, would still be owned by the private utility, and would be subject to taxation.

10. COMMENT BY: United States Environmental Protection Agency

Our principle concern with the transmission project, as you know, is its impact on water quality due to sedimentation, herbicide runoff, and changes in temperature. We believe that the DSEIS does a good job in disclosing these impacts, and in particular, we concur with your inclusion of public water supplies and areas of groundwater availability as "Significant Ecological Resources." We believe that, where possible, this type of information should be provided for the rest of the transmission lines. Also, we believe it would be appropriate for the Final EIS to discuss current right-of-way (ROW) maintenance practices since, according to the DSEIS, more than 90 percent of the proposed route will be on an already cleared ROW owned by New England Power Company. We agree that, compared to use of a new ROW, this is preferable from the standpoint of protection of water quality. The DSEIS is also correct in pointing out that there will still be the potential for the project to adversely affect water quality.

RESPONSE:

As part of the original study, data on supplies and groundwater availability were included in the analysis when such information was available. (See Appendix E - Ecological Resources Impact Study, of the 1978 DEIS, for further information.)

The proposed alternative does call for locating the transmission facility in the cleared right-of-way held by the New England Power Company. It is therefore probable that the maintenance of the total right-of-way would continue to be handled, as in the past, by the New England Power Company.

See also response to comment no. 23.

11. COMMENT BY: United States Environmental Protection Agency

We are particularly concerned with the impact of sedimentation and herbicide runoff on Gordon Pond Brook, a Class A stream which will be crossed by the transmission line between miles 24.2 and 26.5 in link 80. This stream is part of the watershed from which the Town of North Woodstock receives its drinking water. We concur with the EIS's recommendation that herbicides not be used in this area. The transmission line will be in close proximity to several public wells at other locations in the route. While we would agree that the potential for serious adverse effects on these areas from herbicide spraying is small, we believe the potential for spray drift and the importance of maintaining high quality drinking water warrant consideration of banning herbicide use in these areas as well.

RESPONSE:

See response to comment number 10. Note that link 80 does not appear as part of the proposed route.

12. COMMENT BY: United States Environmental Protection Agency

Also of concern is the affect of the project on the existing high quality brook trout fisheries in the Baker River, Mad River, Beebe River, Cockermouth River, Smith River, Halls Brook, Hardy Brook, Fowler River, and Patten Brook. The EIS correctly identifies these areas as important and warranting stringent mitigation measures. Strict erosion control measures and scheduling of construction so as to minimize impacts on fisheries will be necessary. Use of manual ROW clearing methods in these areas should be seriously considered.

RESPONSE:

See response to comment number 10.

13. COMMENT BY: United States Environmental Protection Agency

We believe that where the line crosses the White Mountain National Forest and the Appalachian Trail, use of herbicides should be prohibited.

RESPONSE:

See response to comment number 10.

14. COMMENT BY: Federal Energy Regulatory Commission

As a general observation, it would be helpful to readers not particularly familiar with Dickey-Lincoln if a brief, descriptive summary of the project's required transmission facilities were presented. While reference is made to proposed changes in the project's transmission system on page 18, it is not clear what the total transmission picture is, or the role that the subject link plays in it without resorting to other segments of the study.

RESPONSE:

Changes have been made under "Addenda" (9.03.5).

15. COMMENT BY: United States Department of the Interior

The project does not appear to be consistent with the Statewide Comprehensive Outdoor Recreation Plan. The area is rich in recreation resources, as substantiated by the numerous recreation and water resources in the project vicinity (Appendix K).

RESPONSE:

During the preparation of this supplemental study, extensive review was made of the Statewide Comprehensive Outdoor Recreation Plan. Meetings were held with David E. Hartman to discuss the proposed transmission facilities. The development of transmission facilities on already cleared right-of-way certainly has the least impact on recreation resources, as evidenced in Appendix I - Visual/Recreation Resources Impact Study.

Letters and testimony presented at the public meetings held on this project indicate that recreational value exists in the cleared right-of-way for snowmobiling, skiing, etc.

DOE acknowledges that the area is indeed rich in recreation resources and has taken every effort to minimize the impact of these facilities on these resources.

16. COMMENT BY: United States Department of the Interior

The project does not adequately address the impact of the powerline on the Lake Winnepesaukee Composite Landscape Area, as defined by the North Atlantic Water Resources Study, Appendix N, Visual and Cultural Environment, 1972. The locale is one of seven regionally unique composite landscapes. These composite areas, where four or more different major landscape patterns (landform, land use, vegetation, and water) come together in juxtaposition, are the most diverse landscape areas in the Northeast.

RESPONSE:

DOE reviewed the North Atlantic Water Resources Study--Appendix N during the preparation of the supplemental study. The document contains very generalized mapping related to this landscape type. The proposed route is not located in this area; however, the area may be within the viewshed of the composite area near Plymouth, New Hampshire. DOE feels confident that the extensive resource impact studies as reported in the eight appendices adequately address the impacts associated with the significant natural resources interpreted to form the "composite" area. The visual, recreation, land use, ecological, and cultural resources studies recognize the unique and diverse landscape quality of the area.

17. COMMENT BY: United States Department of the Interior

In Appendix D, page 9, it is noted that great care has been taken to minimize the visual impact of Link 82. However, we believe that it remains a major detriment. Much of it is through the White Mountain National Forest, where recreation use is extremely heavy, and the cleared right-of-way would be highly visible and damaging to the scenic view from Breezy Point, as the line crosses the divide by Mt. Kineo. Other problems on this link relate to erosion potential and to the need for a considerable amount of new access road construction.

RESPONSE:

The studies completed by DOE conclude that any development of transmission facilities along link 82 will cause major impacts. We agree with your assessment of impacts along this link.

18. COMMENT BY: United States Department of the Interior

The impact of Link 83 through four miles of the White Mountain National Forest should be discussed more thoroughly particularly since a crossing occurs at a parcel owned by the State and is intended for future recreational use. Link

83 also crosses the Appalachian Trail which has received Section 6(f) funds in the Forest, and is an issue again not sufficiently developed with regard to project impact (Appendix I, B-17).

RESPONSE:

DOE has made extensive studies of all alternatives, including those links crossing National Forest lands. We have worked closely with the White Mountain National Forest personnel during preparation of this supplement. DOE has also met with state representatives to identify all state lands and potential recreation lands. The recreation resources, either existing or proposed, are mapped and discussed as part of Appendices I and K.

The National Park Service has commented that ". . . the supplement accurately discusses the adverse, visual impact to be anticipated from the transmission lines." DOE agrees with the National Park Service that there has been adequate evaluation of any impact from the proposed transmission facility to the Appalachian Trail. If the project is funded for construction, centerline studies and site-specific mitigation plans will be developed.

19. COMMENT BY: United States Department of the Interior

The supplemental material does not adequately identify recreation areas and parklands such as Mount Cardigan State Forest and the White Mountain National Forest which have received financial assistance from the Land and Water Conservation Fund (L&WCF).

As noted in our June 22, 1978, comments, crossing of those lands involves the jurisdictional interest of the Department's Heritage Conservation and Recreation Service which administers the fund. The use of L&WCF financial parklands for this project would require the Secretary of the Interior's approval, pursuant to the conversion requirements of Section 6(f) of the Land and Water Fund Act. The nature of the crossing, aerial and otherwise, should be addressed and site specific mitigation developed.

RESPONSE:

Neither the proposed facility nor the alternatives affects Mount Cardigan State Forest lands. The transmission proposal does cross approximately 4 miles of the White Mountain National Forest on a cleared right-of-way that presently contains 2 230-kV single-circuit transmission lines.

If the project is funded for construction, centerline studies and site-specific mitigation plans will be developed, and the need for Secretary of Interior approval for locating on this right-of-way will be investigated.

20. COMMENT BY: United States Department of the Interior

Enclosed is the list of potential recreation rivers which have been considered under the National Wild and Scenic River Act and which will be crossed or otherwise impacted by the transmission system. Rivers and river segments on this list have passed the final study evaluation phase. They are five miles or more in length, free-flowing, and are of multi-state or national significance, and they possess one or more of the following values:

...outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values...(Section 1(b), P.L. 90-542)....

The present supplemental statement does not adequately address these rivers and potential impacts to them. We recommend that this be done in the final document. The Heritage Conservation and Recreation Service is available to assist you in this effort. Please contact: Regional Director, Heritage Conservation and Recreation Service, 600 Arch Street, Room 9310, Philadelphia, PA 19106.

RESPONSE:

The consultant to DOE responsible for preparing the visual/recreation study visited the Heritage Conservation and Recreation Service in Philadelphia to obtain information related to this resource topic. Three of the rivers on the list are not in the area of the transmission facilities. The other three are to be crossed by the facilities. DOE's extensive studies of each of these crossings are reported in both the appendices and the supplement.

At the time data was gathered and visits were made to the Philadelphia office, the list was not fully established and many of the rivers were included as preliminary candidates. As such, proper designation was not included in the Supplement. However, the impacts associated with all rivers and streams were fully evaluated and reported in the Supplemental material.

If the project is approved for construction, DOE will be performing more detailed site and mitigation studies at locations where the facility would affect high quality resources. Extensive on-site evaluation would be made and mitigation plans developed.

21. COMMENT BY: United States Department of the Interior

We have two particular areas of concern with the proposed route. First, is the Peregrine Falcon (Falco peregrinus) reintroduction site near the northwestern route corridor, and the potential "critical habitat" intersected by the proposed centerline. On page 43, the Peregrine Falcon is incorrectly termed a threatened species. This species is a federally listed endangered

species. The Department of Energy acknowledges its responsibility to consult with our Fish and Wildlife Service as required by the Endangered Species Act. Since this proposal is a major Federal project, the Act requires: 1) a biological assessment, which is the responsibility of the action agency, and 2) if there is any impact, then formal consultation with the Fish and Wildlife Service should be initiated as soon as possible.

RESPONSE:

DOE acknowledges that the Peregrine Falcon is an Endangered Species. Corrections have been made in the text. (see Addenda and Errata, 9.03.5).

Please see response to comment no. 2 on DOE consultations related to the Peregrine Falcon.

22. COMMENT BY: United States Department of the Interior

The second area of special concern is the crossing of the proposed route over the Baker River in Link 83. The Baker River is a principal river in the restoration program for Atlantic salmon (Salmo salar) in the Merrimack River Basin. Sedimentation and herbicide runoff is a concern in this section. Extreme caution will need to be employed to minimize the impacts of construction and maintenance activities on this river.

RESPONSE:

DOE will review our studies of impact and will determine those areas where special mitigation and environmental protection will be necessary. Your submitted information will assist in developing these mitigation plans.

23. COMMENT BY: United States Department of the Interior

The supplement should address the potential for adverse effects of herbicides on groundwater supplies along the proposed transmission line route. In particular, plans to be followed in the event of accidental herbicide spills should be discussed.

RESPONSE:

Herbicide used to control vegetation on a right-of-way has only a remote possibility of making its way into groundwater. Plants and micro-organisms immobilize and/or decompose them. Large amounts of herbicide are absorbed in the top 6-18 inches of soil. At the typical use rates of today's herbicides, they are rarely detected at or below 36 inches in depth. Even when found, the very low levels constitute merely academic value and lack biologic significance.

Herbicides are less toxic to humans and animals than other pesticides (specifically insecticides). Precautions for their use are written to protect sensitive plants, especially crop plants, to preclude damage.

Herbicide spills generally involve small quantities. Spill containment and cleanup is relatively simple and safe, and residual effects, if any, would be confined to vegetation in the immediate vicinity of the spill.

Spills of potential concern would be those very rare instances involving relatively large volumes of active material, especially where spilled material enters a body of water. The amount of chemical lost, its dilution rate, specific effect level of exposed aquatic inhabitants or users, together with the length of their exposure all determine whether temporary inhibition or permanent damage occur or whether the exposure will lack biologic significance.

Proper training of applicators and conscientious and safe use of chemicals and equipment to reduce failure rate will make these significant spills a very rare occurrence.

24. COMMENT BY: United States Department of the Interior

Historic and Archeological Resources

The statement emphasizes the poor data base available in the New England area. The survey sample was small and based on predictive criteria which do not adequately address both prehistoric and historic archeological and cultural resource concerns. The failure of the agency to coordinate the survey with the State Historic Preservation Office and to submit data and site nominations to the State Historic Preservation Office for evaluation by local, State and National register criteria is a significant error of omission. Proposed mitigation is not adequate. Impacts to historic sites, increased potential for vandalism by increased access to the area, impacts to archeological resources are not fully described, and procedures for mitigation are not clearly defined. The final supplement should address the inadequacies described above.

RESPONSE:

Because the facilities proposed do not have set locations at this stage, cultural resources must be assessed through a more general overview. The survey team made a complete general assessment of local and site-specific architectural features. It also investigated pre-historic sites by sampling based on the knowledge and judgment of the archeological team and by sampling based on environmental stratification, the construction of a model to predict site incidence by weighting of environmental factors such as the presence of important water sources and accessibility of terrain. Historic resources were evaluated through publication and archive research and through local interviews.

During the survey, the State Historic Preservation Officer was informed of the progress of our studies and was consulted on both specific and general findings. Site nominations for the National Register of Historic Places are not appropriate for this more general level of preliminary survey. Mitigative actions recommended include subsequent survey of proposed routes and resource-specific evaluations. Given the design flexibility of the proposed construction, avoidance of archeological sites is the preferred mitigation strategy. The depth and design of the survey has been appropriate to the stage and flexibility of proposal development.

#### 9.03.5 Addenda and Errata

Changes and modification of the DSEIS that was issued in September 1980 have been made through the use of addenda and errata rather than reprinting the entire document. The following Addenda and Errata are included in order that the reader can make the necessary changes to the DSEIS. These, along with the responses to the comments, comprise the overall changes DOE has made in the DSEIS and, as such, constitute the final report issued by DOE.

##### Addenda

1. Section 1.02.1, p. 18: add, after "...1979 NEPOOL resource data," a new paragraph:

The plan proposed for the transmitting of power from the Dickey-Lincoln School Lakes Project to the existing New England electrical grid follows a path from the dams in northern Maine to Moore Substation, northwest of Littleton, New Hampshire, and on to Granite and Moore Substations near Barre, Vermont, and Franklin, New Hampshire, respectively, for the authorized level of 345-kV transmission. The plan includes transmission lines, substation facilities, and communication facilities. Transmission lines will include: a 29.4-mile 138-kV wood pole line from Dickey Substation to Fish River Substation near Fort Kent, Maine via Lincoln School Substation; a 254.7-mile 345-kV double-circuit line on lattice steel towers from Dickey Substation to Moore Dam near Littleton, New Hampshire; a 6.2-mile 345-kV double-circuit line on steel towers from Moore Substation to Comerford Substation; a 31.9-mile 345-kV wood pole line from Moore Substation to Granite Substation near Barre, Vermont; and a 67.6-mile 345-kV wood pole line from Moore Substation to Webster Substation near Franklin, New Hampshire. The plan also proposes substations at both dams, a switching station near Moose River, Maine, and new terminal facilities at Moore, Granite, and Fish River Substations.

2. Section 1.03.2, Figure 1.03-2: add, at bottom of figure page, "Note: This sketch shows the right-of-way configuration for the proposed route only (see fig. 8.03-2 for other alternatives)."

Errata

Summary, page 1, line 30: delete "...east" from "One residence east of the Webster Substation...", and substitute the word "west."

Summary, page 5, line 33: delete "...Service" from "New England Electric Service" and add "...System".

Section 3.08, paragraph 2, p. 43: in the first sentence, delete the word "...Threatened" and add the word "...endangered."

9.04                      Appendices

One appendix (Comment Letters Received - Appendix A) follows. All letters received during review of the Draft Supplement EIS are included. Some letters did not require response; some did not contain comments relevant to the DSEIS and consequently received no response.

APPENDIX A - COMMENT LETTERS RECEIVED

TENNESSEE VALLEY AUTHORITY

NORRIS, TENNESSEE 37828

OCT 16 1980

Timothy J. Murray  
Department of Energy  
P. O. Box 3621  
Portland, Oregon 97208

Dear Mr. Murray:

This letter constitutes TVA's comments on the draft environmental impact statement (DEIS) supplement entitled, "Dickey-Lincoln School Lakes Transmission Project - Maine, New Hampshire, and Vermont," as you requested.

Following our review of the proposed action, as described, we have determined that TVA program interest will not be impacted. Therefore, we have no comments.

We appreciate the opportunity to review this draft supplement.

Sincerely,

Mohamed T. El-Ashry, Ph.D.  
Director of Environmental  
Quality



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, D.C. 20410

OFFICE OF THE ASSISTANT SECRETARY  
FOR COMMUNITY PLANNING AND DEVELOPMENT

IN REPLY REFER TO:

U.S. Department of Energy  
Federal Building  
Bangor, Maine 04401

Gentlemen:

Subject: Dickey-Lincoln School Lakes  
Transmission Project  
Maine, New Hampshire, and Vermont

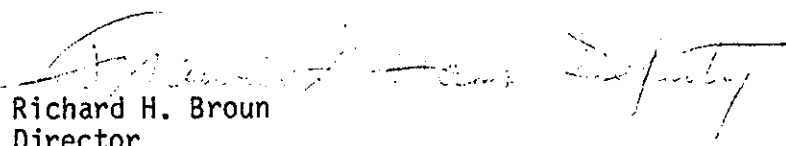
Thank you for providing us the opportunity to review the above draft Environmental Impact Statement (EIS). In accordance with 24 CFR Part 50 Protection and Enhancement of Environmental Quality, Department of Housing and Urban Development procedures, particularly Section 50.61 of our Regulations, we are forwarding the EIS to the responsible HUD Regional Environmental Officer. He will review and comment as appropriate, directly to you by your due date.

To assure prompt review of all non-HUD EIS's, you should send copies of all future EIS's as follows:

1. All EIS's on legislative proposals, regulations, or policy documents of national significance should be sent to Mr. Richard H. Broun, Director, Office of Environmental Quality, HUD, Washington, D. C. 20410; and
2. All other EIS's should be forwarded to the appropriate HUD Regional Office for comment. We have enclosed a list of our Regional Environmental Officers and their addresses.

If you have any questions in this regard, please feel free to contact me at (202) 755-6300.

Sincerely,

  
Richard H. Broun  
Director  
Office of Environmental Quality

Enclosure



3

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

OCT 28 1980

Department of Energy  
Bonneville Power Administration  
ATTN: Mr. Timothy J. Murray  
P. O. Box 3621  
Portland, Oregon 97208

Dear Mr. Murray:

This is in response to a recent request from your agency for comments on the Draft Environmental Impact Statement Supplement for the Dickey-Lincoln School Lakes Transmission Project.

We have reviewed the statement and determined that the proposed action has no significant radiological health and safety impact, nor will it adversely affect any activities subject to regulation by the Nuclear Regulatory Commission.

Since we made no substantive comments, you need not send us the Final Environmental Statement when issued.

Thank you for providing us with the opportunity to review this Draft Environmental Impact Statement Supplement.

Sincerely,

A handwritten signature in cursive script, reading "Daniel R. Muller", is written over the typed name.

Daniel R. Muller, Assistant Director  
for Environmental Technology  
Division of Engineering



NORTHERN MAINE REGIONAL PLANNING COMMISSION

McElwain House  
2 Main Street  
Caribou, Maine 04736



PLAN TODAY .... FOR TOMORROW

Telephone:  
AC (207)  
498-8736

October 31, 1980

Mr. Timothy J. Murray, Asst. Project Manager  
Dickey-Lincoln School Lakes Project  
Benneville Power Administration  
Environmental Planning Section - ETMC  
P.O. Box 3621  
Portland, Oregon 97208

RE: NMRPC Formal Comments on the EIS on the Dickey-Lincoln School Lakes  
Electrical Transmission System.

Dear Mr. Murray,

On November 28, 1977 the Executive Board of the Northern Maine Regional Planning Commission met to discuss the U.S. Corps of Engineers' Environmental Impact Statement dealing with the proposed Dickey-Lincoln School Lakes Project. By unanimous vote of the Board, decision was made to oppose the construction of Dickey-Lincoln School Dams as proposed by the U.S. Corps of Engineers. At the same time the Northern Maine Regional Planning Commission further voted unanimously to recommend that the Upper St. John River and other sites in Maine be studied for low head, smaller hydroelectric facilities for the generation of electricity, while at the same time doing so in an environmentally more acceptable manner. In further clarification of that position we are hereby attaching copies of correspondence dated November 28, 1977 and November 30, 1977 which was directed to Col. John P. Chandler, then New England Division Engineer.

Since that time the Northern Maine Regional Planning Commission has been and continues to develop a plan for an alternative hydroelectric facility in the vicinity of Lincoln School. This facility would involve a single dam of approximately 70 megawatts with output going 100% to the benefit of the State of Maine. This is more fully described in the attached report dated January 1, 1980. The implementation of this proposed concept is now being advanced by the Commission.

Yesterday, on October 30 the Commission's Executive Board again discussed the Dickey-Lincoln School Lakes Project in light of the Dept. of Energy's final project E.I.S. on the transmission facilities. By unanimous vote of

PLANNING DIVISIONS

Economic - Law - Community - River Basin - Agency Coordination & Special Projects

4a

Mr. Timothy J. Murray, Asst. Project Manager

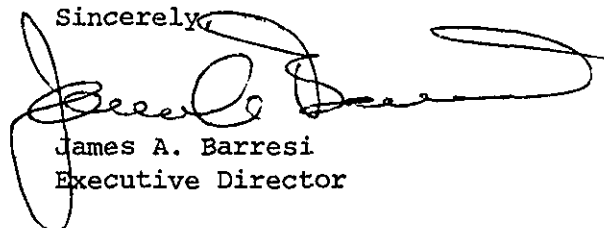
Page 2

October 31, 1980

the Board the following position was taken. In light of the Northern Maine Regional Planning Commission's previous position in opposition to the Dickey-Lincoln Project and since that decision included our opposition to the impacts of the transmission facilities, the NMRPC is also opposed to the transmission facilities.

We trust that the Dept. of Energy will fully reflect the position as the official comments of the Commission in regards to the above subject matter.

Sincerely,

A handwritten signature in dark ink, appearing to read "James A. Barresi", written over the typed name.

James A. Barresi  
Executive Director

JAB/KCA/pml

Enclosures

Bob Linck  
RFD Box 423  
Flint Hill Road  
Lyme Center, ME 03769  
Nov. 3, 1980

received 11/5/80

Dickey-Lincoln Project  
P.O. Box 3621  
Portland, Ore. 97208

Dear Sirs:

I am writing in reference to the draft Supplemental EIS on the electrical transmission system for the proposed Dickey-Lincoln School Lakes hydroelectric project in northern Maine.

I have reviewed the impact statement and find myself quite in agreement on your tentative choice for the transmission line corridor. Among the alternative routes, the Monroe to Franklin route along 69 miles of existing right-of-way appears to have the fewest environmental impacts.

Of the impacts of the proposed action, I would like to voice my concern over two of them in particular. First, the potential effects on the 51 streams and 13 wetlands represent another example of how we continue to chip away on the productivity and diversity of our aquatic ecosystems. Herbicide runoff and sedimentation, and their resultant effects on such bodies of water as French Pond and the Baker River, should not be written off as minor or insignificant. Our water resources are becoming more limited by the day as it is. A second matter of concern involves threatened species such as the peregrine falcon and the silverling (a rare plant found in New Hampshire, Maine, and Massachusetts). I see no mention in the EIS of mitigation measures which would protect the falcon reintroduction site near the northwestern route corridor, and likewise, there is not much space devoted to threatened plant species such as the silverling.

One closing word - none of the potentially significant impacts need be risked at all if the Dickey-Lincoln Project is reviewed sensibly, as a whole. The huge ecological impact and the relative paucity of economic benefits, which I will not detail but of which I am sure you are well aware, make justification of the Project in any form very difficult indeed. I would like to take this opportunity to strongly urge you to consider again the one alternative to the Project (and thus to the transmission line routes) which warrants approval - the null alternative. Don't build the dam, don't build the transmission lines, stop wasting the taxpayers' money (well over 10 million dollars already), and begin considering solutions to the energy crisis which make environmental and economic sense.

Sincerely,

*Robert O. Linck*

Robert O. Linck



U. S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
REGION ONE

219 Federal Building  
Concord, New Hampshire  
03301

IN REPLY REFER TO:

November 4, 1980

Timothy J. Murray, Assistant Project  
Manager for Environmental Studies  
Department of Energy  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208


Dear Mr. Murray:

Subject: Dickey-Lincoln School Lakes Project  
Maine, New Hampshire and Vermont

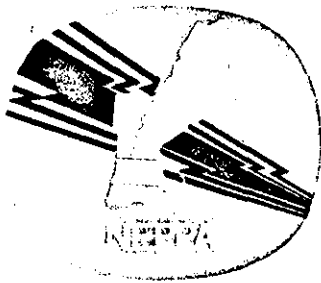
We have been asked to review and comment on the Draft Supplemental EIS for the subject project, which was sent to former Regional Administrator Kirby.

We do not foresee any serious conflicts between your proposal and our programs. As you are probably aware, completion of I-93 in Littleton in the vicinity of the Moore Reservoir is under construction and will likely continue through 1985. We are enclosing drawings taken from the Littleton EIS which shows the location of the new highway. We would suggest that you coordinate with the New Hampshire Department of Public Works and Highways for additional detail in this area and for crossings of Routes 135, 302, 25, 25A, 118, 104 and 11, all State roadways on the Federal-aid Highway system as your design develops.

Sincerely yours,

  
F. T. Comstock, Jr., P.E.  
Division Administrator

Enclosures



# Northeast Public Power Association

148 Linden Street, Suite 104, Wellesley Massachusetts 02181

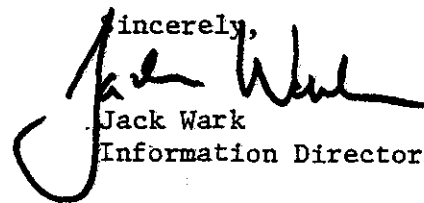
November 6, 1980

Mr. Timothy J. Murray  
Assistant Project Manager for Environmental Studies  
Dickey-Lincoln School Lakes Transmission EIS Project  
Bonneville Power Administration-- ETMC  
PO Box 3621  
Portland, Oregon 97208

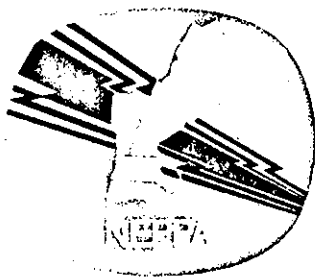
Dear Mr. Murray:

Enclosed is testimony regarding DOE's revised transmission plan for the Dickey-Lincoln project. We would appreciate having it placed in the public record.

Sincerely,



Jack Wark  
Information Director



# Northeast Public Power Association

148 Linden Street, Suite 104, Wellesley Massachusetts 02181

November 13, 1980

The Northeast Public Power Association, representing the 81 consumer-owned electric utilities in New England, has long been a vigorous supporter of Dickey-Lincoln, the federal hydroelectric project proposed for northern Maine.

Central to our position is the well-documented need in Maine and the rest of New England for economically-priced electric power. Exorbitant electric rates jeopardize the economic survival of our region. We have the highest electric rates in the nation. And these rates contribute all too directly to problems in our economy--to high unemployment, a shortage of industry, wages below the national average, high product prices, and so on. Dickey-Lincoln, with its abundant supply of economically-priced power, would represent a first step toward addressing the problem of high electric rates in New England. This of course is not to suggest that Dickey-Lincoln would reduce our electric bills. It will not. Obviously, no single generating facility will do that. But, Dickey-Lincoln would produce power that will be needed in the coming years and at costs lower than any alternative. In short, Dickey-Lincoln would help stabilize our region's electric rates.

The project would be especially prolific in producing peaking power. Projections are that Dickey-Lincoln would provide nearly one-fourth of Maine's total peaking power and about 17 percent of the entire region's peaking power. An output of such magnitude would establish Dickey-Lincoln as one of the most valuable peaking facilities in the nation.

Moreover, Dickey-Lincoln would provide considerable base-and intermediate-load power for Maine consumers. Estimates are that the project, if it were to go "on line" in the 1980's, would provide 4.5 percent of Maine's total power.

An important reason for supporting Dickey-Lincoln's construction involves the very nature of the facility--that is, a facility powered by water. Water, after all, is the cheapest of all available energy sources. Water--unlike oil or coal or natural gas or uranium--is a renewable resource. We will not run out of it. It will not become scarce, nor will its availability be subject to political developments in foreign nations. A generating facility that relies on a fossil fuel--like oil or coal--is a generating facility whose fuel costs are bound to do one thing: They are bound to increase. Not so with Dickey-Lincoln. As Senator Edward M. Kennedy of Massachusetts once noted, Dickey-Lincoln would provide a "unique guarantee" of electric power at today's prices for many years to come. The cost of Dickey-Lincoln's "fuel"--which would be water--would start at zero and remain at zero.

Electric rates in parts of the country where major hydroelectric facilities exist, demonstrate that hydropower works, and works cheaply. The Pacific Northwest, for example, which gets much of its power from hydro-generation, has the lowest electric rates in the country. The rates there are some 50 percent lower than they are here in New England, where there are no major hydro projects.

Another telling example is in New York. The state, as a whole, has the highest rates in the nation. The state's municipal utilities, however, which receive power from hydro facilities at Niagara Falls and on the St. Lawrence River, have rates which are among the lowest in the United States. The rates of the New York municipals are, in some cases, as much as 75 percent lower than they are in New England.

Another advantage to hydropower, apart from the fact that it is cheap, involves its generally benign relationship with the environment. It is clean and safe. It does not pollute the air in the manner of fossil fuels. It does not pose the safety hazards that, some contend, are posed by nuclear power.

In our enthusiasm regarding the positive effects that Dickey-Lincoln would have on New England's energy situation and economy, however, we are not unmindful of environmental considerations. This being the case, we endorse the new transmission route which the U.S. Department of Energy has formulated in connection with the project. The new proposed route, as we understand it, deletes a 48-mile 345 kilovolt line previously proposed between Barre, Vermont and Essex, Vermont. This Barre-to-Essex line would have necessitated a widening of the existing right of way in that area, thereby altering the existing environment. Its deletion, we believe, is in keeping with efforts to limit, as much as possible, the Dickey-Lincoln project's impact on the New England environment.

It should also be noted that, under the new DOE transmission plan, a new 70-mile 345 kilovolt line is proposed between Comerford, New Hampshire and Webster, New Hampshire. This line, however, is due to run through an existing right of way and, thus will have virtually no impact on the existing environment.

The new DOE transmission plan seems to us to be a sound one. Our judgment is that it strikes a responsible balance between two important needs--the need to transmit Dickey-Lincoln power to New England consumers in an economical fashion and the need to protect the environment from alterations that are not totally necessary. We commend DOE for its work and endorse its new transmission plan.



New England Power Service Company  
20 Turnpike Road  
Westborough, Massachusetts 01581  
Tel. (617) 366-9011

November 5, 1980

Mr. Timothy J. Murray  
Assistant Project Manager  
U.S. Department of Energy  
Bonneville Power Administration  
Environmental Planning Section - ETMC  
P. O. Box 3621  
Portland, OR 97208

Dear Mr. Murray:

We have reviewed the supplemental EIS draft, dated September 1980, for the Dickey-Lincoln transmission facilities.

Figures 1.03-2 (Section 1) and 3 (Appendix D) showing the cross section of the 230 kV right of way are classified as "Proposed Facility." These diagrams definitely create an image for the ultimate appearance of the transmission corridor. We believe that, although the text on Page 20 leaves room for flexibility in a final decision, the right of way cross-section sketches are definitely prejudicial. Therefore, we request that you remove these figures from the report.

If the removal of the figures detracts too much from the report to be acceptable to you, then it should be made clear, at least on Figure 1.03-2, that this proposal is only one of at least two possible routes, and that a final decision has not been made. This information should appear on Figure 1.03-2, as well as in the text.

Additionally, for the reliability of the New England transmission system, it may not be advisable to use this single transmission corridor for integrating all contemplated northern New England generating capacity into the New England system. For that reason, the second alternate route should be kept open and considered before any construction decisions are made. The second alternate route is slightly more economical and is ranked close to the proposed plan. We request that some reference to this concept be made in the text.

To reconfirm our present policy, the options to use this right of way must be investigated again, when the Dickey-Lincoln project is approved for construction. All options which use our rights of way would have to be approved by us and be compatible with our long range needs to provide adequate and reliable supply to our customers in the New England area.

Comments by our Environmental Affairs Department follow:

Page 5 "New England Electric Service, MA. (NEES)" should be "New England Electric System."

Page 21, Section 1.03.3 Design Criteria and Figure 1.03.3.

NEP believes that the visual intrusion created by 165 foot high double-circuit lattice type steel structures between Moore and Comerford substations is excessive. Proposed lattice type steel towers rising more than twice as high as the existing 75 foot high wood pole arm structures near a state highway and in the river valley is more than a mere "intrusion." This is a heavily traveled area as compared with the proposed right-of-way from Dickey to the Connecticut River Valley.

NEP believes that having two 345 kV circuits is not good practice for system reliability.

Appendix J - Historical-Archaeological Impact Study, Page 2

"Recommendations

1. We recommend a full and intensive archaeological survey of the final right of way."

NEP questions whether "a full and intensive archaeological survey" would include sampling. NEP believes that sampling should only be conducted at those proposed tower locations which are deemed to be sites of possible archaeological value, not across the full width and length of the final right of way. On Page 21 of the Draft EIS Supplement, Section 103.4 Construction Sequence, it states "Where the right of way is already cleared, certain steps such as access road construction...will not be required." As all of the NEP right of way is already cleared, no access road construction would be necessary; therefore, no archaeological survey relative to access roads would be necessary for these links. As the actual sites of excavation for the proposed towers will occupy an infinitesimal portion of the total area, it is only at these sites, if of archaeological value, that sampling should be conducted. The taxpayers of the United States should not have to pay for sampling in the approximately 99% of the right of way which are not to be tower locations. A full and intensive field survey could adequately document sites of probable archaeological value not to be impacted by the proposed towers and file this data with the State Archaeologist. In this manner the convenience, the contextual relationships of any surviving artifacts on the existing right of way would be preserved. NEP believes that "in-situ" preservation is superior to excavation and removal, and a more economical path to pursue.

Appendix J - Historical-Archaeological Impact Study, Page 13

In the penultimate paragraph, mention is made of "a policy of the PAF (Public Archaeology Facility) not to enter private property without owner permission." NEP expects that permission will be requested prior to entry by the PAF or any other organization conducting any further surveys.

8a

Mr. Timothy J. Murray  
November 5, 1980

Page 3

NEP would expect also to be contacted prior to any sampling conducted on its lands. Any proposed sampling would be subject to an Agreement to be negotiated between NEP and other parties, including NEP's ownership of any artifacts uncovered for probable permanent loan to a curatorial institution.

Very truly yours,

Thakor H. Patel

Thakor H. Patel  
Senior Engineer

New England Power Service Company  
(For New England Power Company)

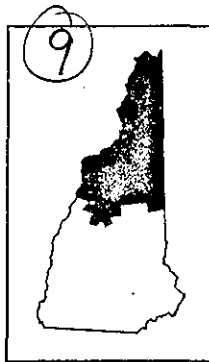
THP:kmu

# North Country Council, Inc.

Oliver W. Nelson, President  
Gerald I. Coogan, Executive Director

P. O. Box 40 Franconia  
New Hampshire 03580

Telephone 603/823-8108



November 17, 1980

Department of Energy  
Bonneville Power Administration  
P. O. Box 3621  
Portland, Oregon 97208

Attention: Mr. Timothy Murray

Dear Mr. Murray:

This is in response to your request for comments on the Draft Environmental Impact Statement Supplement-Dickey Lincoln School Lakes Transmission Project.

First of all, let me say that your Environmental Impact Statement was well done and that our Land Use Planning Advisory Committee agrees with your recommended transmission route.

My one question concerns the status of the proposed power lines with regard to local property taxation. It is my understanding that the proposed lines would be tax exempt and that if the lines were run on existing New England Power Company's towers those would also become exempt. Some of our committees are concerned about the impact these exemptions could have on their tax base. For example, Haverhill's largest existing taxpayer is currently the New England Power Company.

I believe that your EIS does not adequately address this issue and our Land Use Planning Advisory Committee would like to have some additional information regarding this subject.

Sincerely,

Raymond Lobdell  
Community Planning Coordinator

RL:emr  
5.2  
11.102



United States  
Department of  
Agriculture

Soil  
Conservation  
Service

Federal Building  
Durham, New Hampshire 03824

10

November 21, 1980

Mr. Timothy J. Murray  
Assistant Project Manager  
for Environmental Studies  
Dickey-Lincoln School Lakes Project  
Bonneville Power Administration  
Environmental Planning Section - ETMC  
P.O. Box 3621  
Portland, Oregon 97208

Dear Mr. Murray:

We have reviewed the Department of Energy's draft Supplemental Environmental Impact Statement on the Dickey-Lincoln School Lakes electrical transmission system.

The draft EIS adequately addresses the environmental concerns of the Soil Conservation Service.

Sincerely,

*Richard L. Porter, Acting for*  
Richard L. Porter  
State Conservationist

cc: N. Berg, Chief, SCS



The Soil Conservation Service  
is an agency of the  
Department of Agriculture

SCS-AS-1  
10-79



Department of Energy  
Region 1  
150 Causeway Street  
Boston, Mass. 02114

NOV. 20, 1980.

Timothy J. Murray  
Assistant Program Manager for  
Environmental Studies  
Dickey-Lincoln School Lakes Project  
Bonneville Power Administration  
Environ-Planning Section-ETMC  
P.O. Box 3621  
Portland, Oregon 97208

Dear Mr. Murray:

Region I in its capacity to evaluate all energy alternatives affecting the New England energy picture has reviewed the Draft EIS Supplement for the Dickey-Lincoln Lakes Power project. We are confident that this additional information will be beneficial to the entire decision making process.

We have no additional comments to offer beside the fact that we are supportive of this entire project, which will help the New England area reduce its dependency on foreign petroleum resources. We will also continue to remain involved with all the decision making processes.

Thank you for the opportunity to comment.

Sincerely,

Harold J. Keohane  
Regional Representative



12  
UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL OCEAN SURVEY  
Rockville, Md. 20852

NOV 14 1980

OA/C52x6:JLR

TO: PP/EC - Joyce M. Wood  
FROM: OA/C5 - Robert B. Rollins  
SUBJECT: DEIS #8010.06 - Dickey-Lincoln School Lakes Transmission  
Project; Maine, New Hampshire, and Vermont (Supplement)

The subject statement has been reviewed within the areas of the National Ocean Survey's (NOS) responsibility and expertise, and in terms of the impact on the proposed action on NOS activities and projects.

Geodetic control survey monuments may be located in the proposed transmission line routes. If there is any planned activity which will disturb or destroy these monuments, NOS requires not less than 90 days' notification in advance of such activity in order to plan for their relocation. NOS recommends that funding for this project includes the cost of any relocation required for NOS monuments.



**UNITED STATES DEPARTMENT OF COMMERCE**  
**The Assistant Secretary for Policy**  
Washington, D.C. 20230

NOV 19 1983

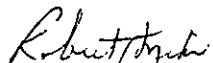
Mr. Timothy J. Murray  
Bonneville Power Administration  
Department of Energy  
P. O. Box 3621  
Portland, Oregon 97208

Dear Mr. Murray:

This is in reference to your draft environmental impact statement supplement entitled, "Dickey-Lincoln School Lakes Transmission Project, Maine, New Hampshire, and Vermont." The enclosed comment from the National Oceanic and Atmospheric Administration (NOAA) is forwarded for your consideration.

Thank you for giving us an opportunity to provide this comment, which we hope will be of assistance to you. We would appreciate receiving ten copies of the final supplemental statement.

Sincerely,

  
Robert T. Miki  
Deputy Assistant Secretary for  
Regulatory Policy (Acting)

Enclosure Memo from: Robert B. Rollins  
National Ocean Survey  
NOAA



## *New Hampshire Snowmobile Association, Inc.*

RFD 2, Armory Road Milford, New Hampshire 03055 Tel. (603) 673-6300

November 12, 1980

Dickey-Lincoln School Lakes Project  
Bonneville Power Administration  
Environmental Planning Section-ETMC  
P.O. Box 3621  
Portland, Oregon 97208

Attn: Timothy J. Murray  
Assistant Projects Manager  
For Environmental Study

Dear Mr. Murray:

As President of the New Hampshire Snowmobile Association, I am very concerned about the Dickey-Lincoln School Lakes Project. The New Hampshire Snowmobile Association is an independent non-profit organization supported by dues from organized Snowmobilers in New Hampshire. We have 127 Clubs with approximately 6000 Club Members. We also represent Snowmobile Dealers, Manufacturers, Contributors and Individual Members who do not belong to a Snowmobile Club.

My concern is established snowmobile trails on private land. Any Snowmobile Club that is a member in good standing of N.H.S.A. is eligible to apply for Grant-In-Aid to the Bureau of Off Highway Vehicles for trail construction bridges and winter grooming. The Grant-In-Aid program is funded from the first \$2.00 of every snowmobile registration. One of the regulations that a Club must comply with is to have landowner permission written or oral and the landowner must be listed on the application. If Utility Companies purchase rights of way to construct transmission lines it is almost impossible for a Snowmobile Club to receive assistance for major trails on these properties. Therefore, if the future construction of the Dickey-Lincoln School Lakes Project transmission lines rights of way were to be purchased by the Utility Company this could be a great hardship for local Snowmobile Clubs and the sport of Snowmobiling. The Bureau of Off Highway Vehicles has been instructed by the Legislature to provide Liability Insurance for private landowners who do not post their land against Snowmobiling.

I am sure that you are aware that New Hampshire is a tourist state. I am enclosing a survey that will indicate the Economic Impact that Snowmobiling has in New Hampshire.

I hope that you will work with the New Hampshire Snowmobiling Association and the Bureau of Off Highway Vehicles in any future plan or study.

Sincerely Yours,

*Barton C. Witham*

Barton C. Witham  
President

NEW HAMPSHIRE SNOWMOBILE ASSOCIATION

BCW/pw  
encl.

OFFICE OF THE GOVERNOR

STATE A-95 CLEARINGHOUSE

5th Floor, Pavilion Office Building



14  
STATE PLANNING OFFICE

AREA CODE 802-828-3326

STATE OF VERMONT

MONTPELIER, VERMONT 05602

MEMORANDUM

To: Timothy J. Murray, Assistant Project Manager for  
Environmental Studies  
U. S. Dept. of Energy, Bonneville Power Administration  
Environmental Planning Section-ETMC, P. O. Box 3621  
Portland, Oregon 97208

From: Emily Neary, A-95 Coordinator

Date: November 24, 1980

Re: draft supplemental environmental impact statement on the  
Dickey-Lincoln School Lakes electrical transmission system.

---

As the State Clearinghouse under OMB Circular A-95  
we have notified other public agencies with a possible  
interest in your: draft supplemental environmental impact  
statement.

Copies of comments received are attached: from the  
Vermont Division for Historic Preservation and the Vermont  
Agency of Environmental Conservation. No other comments were  
received. In the event that the Vermont corridor is reconsidered,  
please send information to the State A-95 Clearinghouse for  
review.

:enclosures



STATE OF VERMONT

AGENCY OF DEVELOPMENT AND COMMUNITY AFFAIRS

OFFICE OF THE SECRETARY (802) 828-3211

MONTPELIER, VERMONT 05602

DEPARTMENTS OF:

Economic Development 828-3221  
Housing & Community Affairs 828-3217

DIVISIONS OF:

Administration 828-3231  
Historic Preservation 828-3226  
Vermont Travel Division 828-3236  
Vermont Life Magazine 828-3241

October 14, 1980

Mrs. Emily Neary  
State A-95 Coordinator  
State Planning Office  
Montpelier, Vermont 05602

Re: Draft Supplemental Environmental Impact Statement  
Dickey-Lincoln School Lakes Transmission Project

Dear Mrs. Neary:

Thank you for the opportunity to comment on the above-referenced project.

The project as proposed will have no affect on historic or archeological properties located within Vermont. Further comments from this Division are not warranted unless the project scope is expanded into Vermont.

Sincerely,

DIVISION FOR HISTORIC PRESERVATION

*William B. Pinney*

William B. Pinney  
Director/Deputy State Historic  
Preservation Officer

WBP/cjd



# State of Vermont

## AGENCY OF ENVIRONMENTAL CONSERVATION

Montpelier, Vermont 05602

OFFICE OF THE SECRETARY

Department of Fish and Game  
Department of Forests, Parks, and Recreation  
Department of Water Resources  
Environmental Board  
Division of Environmental Engineering  
Division of Environmental Protection  
Natural Resources Conservation Council

### MEMORANDUM

TO: Emily Neary, A-95 Coordinator

FROM: Edward J. Koenemann, Director of Planning *EJK*

DATE: November 13, 1980

SUBJECT: A-95 Response  
Draft Supplemental Environmental Impact Statement  
Dicky-Lincoln School Lakes Transmission Project

The review of the latest information as submitted indicates the proposal is located in New Hampshire. If this is the case we have no comments. If and when the Transmission Lines are planned for construction in Vermont our concerns will be the same as expressed in writing and published in the Draft Environmental Statement pp 9-339-9-342 (copy attached).

EJK:ah

Attached



15

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

November 24, 1980

Mr. Timothy J. Murray  
Assistant Project Manager for  
Environmental Studies  
Dickey-Lincoln School Lakes Project  
Bonneville Power Administration  
Environmental Planning Section - ETMC  
P.O. Box 3621  
Portland, OR 97208

Dear Mr. Murray:

In accordance with our review responsibilities under the National Environmental Policy Act, we have reviewed the Draft Supplemental Environmental Impact Statement (DSEIS) for the proposed change in the electrical transmission system for the proposed Dickey-Lincoln School Lakes hydroelectric project in northern Maine.

This letter supplements our comments to you on June 14, 1978 and to the Corps of Engineers on December 7, 1977, September 8, 1978, February 20, 1979 and April 28, 1980 which present in detail our concerns about the Dickey-Lincoln dams and transmission projects. We continue to have these concerns and, rather than reiterate them here, we incorporate them by reference.

According to the DSEIS, the change consists of the addition of 73.8 miles of 345kV transmission line from Moore Substation near Littleton, New Hampshire, to Webster Substation near Franklin, New Hampshire, and the deletion of a 345kV line from Granite Substation near Montpelier, Vermont, to Essex Substation near Burlington, Vermont. These changes are apparently due to the substantial decrease in load estimates and changes in the generation assumptions over the past few years. We believe it would be useful for the Final EIS to discuss whether this substantial decrease in load estimates indicates a lessening in the need for Dickey-Lincoln or a shift in the market area.

Our principle concern with the transmission project, as you know, is its impact on water quality due to sedimentation, herbicide runoff, and changes in temperature. We believe that the DSEIS does a good job in disclosing these impacts, and in particular, we concur with your inclusion of public water supplies and areas of groundwater availability as "Significant Ecological Resources." We believe that, where possible, this type of information should be provided for the rest of the transmission lines. Also, we believe it would be appropriate for the Final EIS to discuss current right-of-way (ROW) maintenance practices since, according to the DSEIS, more than 90 percent of the proposed route will be on an already cleared ROW owned by New England Power Company. We agree that, compared to use of a new ROW, this is preferable.

from the standpoint of protection of water quality. The DSEIS is also correct in pointing out that there will still be the potential for the project to adversely affect water quality.

We are particularly concerned with the impact of sedimentation and herbicide runoff on Gordon Pond Brook, a Class A stream which will be crossed by the transmission line between miles 24.2 and 26.5 in link 80. This stream is part of the watershed from which the Town of North Woodstock receives its drinking water. We concur with the EIS's recommendation that herbicides not be used in this area. The transmission line will be in close proximity to several public wells at other locations in the route. While we would agree that the potential for serious adverse effects on these areas from herbicide spraying is small, we believe the potential for spray drift and the importance of maintaining high quality drinking water warrant consideration of banning herbicide use in these areas as well.

Also of concern is the affect of the project on the existing high quality brook trout fisheries in the Baker River, Mad River, Beebe River, Cockermouth River, Smith River, Halls Brook, Hardy Brook, Fowler River, and Patten Brook. The EIS correctly identifies these areas as important and warranting stringent mitigation measures. Strict erosion control measures and scheduling of construction so as to minimize impacts on fisheries will be necessary. Use of manual ROW clearing methods in these areas should be seriously considered.

We also believe that where the line crosses the White Mountain National Forest and the Appalachian Trail, use of herbicides should be prohibited.

Finally, it is unclear how this DSEIS process will fit into the Corps' EIS process for the overall project. It is our understanding that the Final EIS is in Corps headquarters awaiting approval, and that there is a possibility for its release prior to DOE's release of a Final Supplemental EIS. We believe this would be an incorrect procedure, and request that DOE and the Corps synchronize their schedules in order for the Final Supplemental EIS to be released with the Final EIS to avoid a conflict with Council on Environmental Quality regulations.

In accordance with our national rating system (see enclosed explanation) we have rated this EIS ER-2. If you have any questions or wish to discuss our comments, please contact Elizabeth Higgins of my staff at 617/223-0400.

Sincerely,



Richard R. Keppler  
Acting Director  
Environmental Impact Office

Enclosure

cc: Colonel William E. Hodgson, Jr., COE



16

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

NEW ENGLAND REGION  
12 NEW ENGLAND EXECUTIVE PARK  
BURLINGTON, MASS. 01803

December 1, 1980

Mr. Timothy J. Murray  
Assistant Project Manager  
for Environmental Studies  
Dickey-Lincoln School Lakes Project  
P.O. Box 3621  
Portland, Oregon 97208

Dear Mr. Murray:

Mr. Whittington has requested I respond to your letter of October 21, 1980, requesting our comments on the EIS Draft Supplement, Dickey Lincoln School Lakes Transmission Project; we have the following comments.

Although there is not sufficient information on the exact distance and elevation of the proposed transmission lines with respect to the airports in the area, we do not find any adverse impact on the airports in the area related to the proposed route. The proposed route as illustrated in Figure 1.03-1 of the Draft Supplement, includes links 41F, 42F, 81, 83 and 86 in Segment F, Moore to Webster, New Hampshire.

This evaluation is based on the observation that the proposed route does not traverse in the close proximity of the airports in the area. However, the alternative routes are located close to some airports (e.g., link 84 passes close to Plymouth Municipal Airport, NH), and there is not adequate information in the report on the distance and elevation of the transmission lines. Hence we could not determine the potential conflicts of the alternate routes with the airport operations.

Moreover, it should be noted that our determination pertains only to the Segment F proposed route shown in Figure 1.03-1 of the Draft Supplement EIS of September 1980. It does not replace the comments made in our letter of June 9, 1978, on the Draft EIS for Dickey Lincoln School Lakes Transmission Project (March 1978)

We appreciate the opportunity to review the potential impacts of the proposed project on aviation activities.

Sincerely,

A handwritten signature in cursive script, reading "Vincent A. Scarano", is written over the typed name.

VINCENT A. SCARANO

Chief, Plans/Programs Branch

17

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

White Mountain National Forest  
P.O. Box 638, Laconia, NH 03246

1950  
December 2, 1980



Mr. Timothy J. Murray  
DOE, Bonneville Power Administration  
P.O. Box 3021  
Portland, OR 97208

Dear Mr. Murray:

We have reviewed the Draft Supplement to the EIS for the Dickey-Lincoln School Lakes Transmission Project in New Hampshire and have no comment.

Sincerely,

JAMES R. JORDAN  
Forest Supervisor

18

FEDERAL ENERGY REGULATORY COMMISSION  
NEW YORK REGIONAL OFFICE  
26 FEDERAL PLAZA, ROOM 2207  
NEW YORK, NEW YORK 10278

December 12, 1980

Mr. Timothy J. Murray  
Department of Energy  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208

Re: DOE/EIS-0008-D  
Environmental Impact Statement Supplement  
Dickey-Lincoln School Lakes Project

Dear Mr. Murray:

We have reviewed the subject report and have no comments to offer. The impact that the proposed Moore-Comerford-Webster 345 kV line would have on the environment appears to have been carefully explored and evaluated in the study.

As a general observation, it would be helpful to readers not particularly familiar with Dickey-Lincoln if a brief, descriptive summary of the project's required transmission facilities were presented. While reference is made to proposed changes in the project's transmission system on page 18, it is not clear what the total transmission picture is, or the role that the subject link plays in it without resorting to other segments of the study.

Thank you for the opportunity of commenting on this EIS.

Very truly yours,

*James D. Hebson*

James D. Hebson  
Regional Engineer



# United States Department of the Interior

OFFICE OF THE SECRETARY  
WASHINGTON, D.C. 20240

ER 80/1125

DEC 11 1980

Mr. Timothy J. Murray  
Dickey-Lincoln School Lakes Project  
Bonneville Power Administration  
P.O. Box 3621  
Portland, Oregon 97208

Dear Mr. Murray:

The Department of the Interior has reviewed the draft supplemental environmental statement for the Electrical Transmission System for the Dickey-Lincoln School Lakes Hydroelectric Project, Aroostook County, Maine. We have the following comments.

## General Comments

The transmission study is only a part of the Dickey-Lincoln School Lakes Hydroelectric Project. Since this is a supplemental document covering corridor changes and an addition to the transmission system, our Departmental comments of June 22, 1978, with all attachments still apply. The construction of this transmission system is dependent upon the final decision on the entire hydroelectric project. At some time in the future, the impacts of the dams, reservoirs, appurtenant structures, transmission lines and facilities, and mitigation plans must be combined into a comprehensive analysis.

Based upon what we have reviewed to date, we still consider the Dickey-Lincoln School Lakes Project unsatisfactory from the standpoint of environmental quality. The project induced losses include the large scale destruction of terrestrial and aquatic resources, and the elimination of an important part of the last remaining wilderness recreational area in the Northeast. Moreover, this area represents a unique combination of aesthetic and natural resource values no longer existing anywhere else in the United States. In view of these concerns, we must continue to recommend that the Dickey-Lincoln School Lakes Project not be constructed.

As stated in our letters of March 1, 1979, and May 13, 1980, to the Corps of Engineers, the Department may refer this matter to the Council on Environmental Quality under the procedures specified in 40 CFR 1504.

### Historic and Archeological Resources

The statement emphasizes the poor data base available in the New England area. The survey sample was small and based on predictive criteria which do not adequately address both pre-historic and historic archeological and cultural resource concerns. The failure of the agency to coordinate the survey with the State Historic Preservation Office and to submit data and site nominations to the State Historic Preservation Office for evaluation by local, State and National register criteria is a significant error of omission. Proposed mitigation is not adequate. Impacts to historic sites, increased potential for vandalism by increased access to the area, impacts to archeological resources are not fully described, and procedures for mitigation are not clearly defined. The final supplement should address the inadequacies described above.

### Recreation Resources

The project does not appear to be consistent with the Statewide Comprehensive Outdoor Recreation Plan. The area is rich in recreation resources, as substantiated by the numerous recreation and water resources in the project vicinity (Appendix K).

The project does not adequately address the impact of the power-line on the Lake Winnepesaukee Composite Landscape Area, as defined by the North Atlantic Water Resources Study, Appendix N, Visual and Cultural Environment, 1972. The locale is one of seven regionally unique composite landscapes. These composite areas, where four or more different major landscape patterns (landform, land use, vegetation, and water) come together in juxtaposition, are the most diverse landscape areas in the Northeast.

In Appendix D, page 9, it is noted that great care has been taken to minimize the visual impact of Link 82. However, we believe that it remains a major detriment. Much of it is through the White Mountain National Forest, where recreation use is extremely heavy, and the cleared right-of-way would be highly visible and damaging to the scenic view from Breezy Point, as the line crosses the divide by Mt. Kineo. Other problems on this link relate to erosion potential and to the need for a considerable amount of new access road construction.

The impact of Link 83 through four miles of the White Mountain National Forest should be discussed more thoroughly particularly since a crossing occurs at a parcel owned by the State and is

intended for future recreational use. Link 83 also crosses the Appalachian Trail which has received Section 6(f) funds in the Forest, and is an issue again not sufficiently developed with regard to project impact (Appendix I, B-17).

#### Section 6(f) Comments

The supplemental material does not adequately identify recreation areas and parklands such as Mount Cardigan State Forest and the White Mountain National Forest which have received financial assistance from the Land and Water Conservation Fund (L&WCF).

As noted in our June 22, 1978, comments, crossing of those lands involves the jurisdictional interest of the Department's Heritage Conservation and Recreation Service which administers the fund. The use of L&WCF financial parklands for this project would require the Secretary of the Interior's approval, pursuant to the conversion requirements of Section 6(f) of the Land and Water Fund Act. The nature of the crossing, aerial and otherwise, should be addressed and site specific mitigation developed.

#### National Park Resources

The only unit of the National Park System to be impacted by the transmission system is the Appalachian National Scenic Trail. The Appalachian Trail Project Office of the Department's National Park Service recognizes that special uses of the corridor established to protect the Trail will be necessary.

Transmission lines and other utility crossings, while incompatible with the objectives of the Trail, are possible and may be desirable for the national good. Their negative effects should, however, be lessened by management techniques and by the use of screening devices. The supplement accurately discusses the adverse, visual impact to be anticipated from the transmission lines.

#### Potential Recreation Rivers

Enclosed is the list of potential recreation rivers which have been considered under the National Wild and Scenic Rivers Act and which will be crossed or otherwise impacted by the transmission system. Rivers and river segments on this list have passed the final study evaluation phase. They are five miles or more in length, free-flowing, and are of multi-state or national significance, and they possess one or more of the following values:

...outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values,...(Section 1(b), P.L. 90-542).

Further they meet the classification criteria for recreation rivers because they are readily accessible by road or railroad, have some development along their shorelines, and have undergone some impoundment or diversion in the past.

It is important to note that this study is a preliminary survey of rivers and should not be confused with the more detailed congressionally mandated studies under the National Wild and Scenic Rivers Act which are conducted by the National Park Service and Forest Service. The purpose of the Recreation Rivers Study is to:

1. Identify a balanced representation of river segments--including urban waterways--that possess recreational and cultural significance worthy of conservation at the Federal and State government levels.
2. Stimulate actions, at all levels of government and within the private sector, which will assure the conservation of and public access to these rivers.

Also it should be noted that those rivers meeting the criteria of the Wild and Scenic Rivers Act will be placed on the National River Inventory List. Rivers on this list will be considered under the provisions of the President's Environmental Message of August 2, 1979 which directed that: "all federal agencies shall avoid or mitigate adverse effects on rivers identified in the National Inventory." Each of these rivers should be afforded the consideration outlined in the "Procedures for Interagency Consultation to Avoid or Mitigate Adverse Effects on Rivers in the Nationwide Inventory" issued by the Council on Environmental Quality on August 10, 1980.

The present supplemental statement does not adequately address these rivers and potential impacts to them. We recommend that this be done in the final document. The Heritage Conservation and Recreation Service is available to assist you in this effort. Please contact: Regional Director, Heritage Conservation and Recreation Service, 600 Arch Street, Room 9310, Philadelphia, PA 19106.

#### Fish and Wildlife Resources

The statement adequately addresses the impacts to the fish and wildlife resources along the 73.8-mile route. We commend the

Department of Energy for locating 69 miles of the proposed line within an existing cleared transmission right-of-way. This action clearly reduces the impacts to fish and wildlife resources.

We have two particular areas of concern with the proposed route. First, is the Peregrine Falcon (Falco peregrinus) reintroduction site near the northwestern route corridor, and the potential "critical habitat" intersected by the proposed centerline. On page 43, the Peregrine Falcon is incorrectly termed a threatened species. This species is a federally listed endangered species. The Department of Energy acknowledges its responsibility to consult with our Fish and Wildlife Service as required by the Endangered Species Act. Since this proposal is a major Federal project, the Act requires: 1) a biological assessment, which is the responsibility of the action agency, and 2) if there is any impact, then formal consultation with the Fish and Wildlife Service should be initiated as soon as possible.


The second area of special concern is the crossing of the proposed route over the Baker River in Link 83. The Baker River is a principal river in the restoration program for Atlantic salmon (Salmo salar) in the Merrimack River Basin. Sedimentation and herbicide runoff is a concern in this section. Extreme caution will need to be employed to minimize the impacts of construction and maintenance activities on this river.

#### Groundwater Resources

The supplement should address the potential for adverse effects of herbicides on groundwater supplies along the proposed transmission line route. In particular, plans to be followed in the event of accidental herbicide spills should be discussed.

We hope these comments and recommendations will be of assistance in completing the final document.

Sincerely,

  
James H. Rathlesberger  
Special Assistant to  
Assistant SECRETARY

Enclosure

<u>River Name</u>	<u>Segment Description</u>	<u>Outstandingly Remarkable Provision</u>
<u>Baker River</u> (including)	Plymouth to headwaters	<u>Geologic</u> (segment includes unique glacially formed Polar caves).
South Branch of Baker River	Confluence with Baker River to 5 miles upstream	<u>Historic</u> (segment includes significant Colonial trade route connecting seacoast with northern Connecticut River Valley. Site of the first road built in the State in 1767).  <u>Recreation</u> (river is a regionally significant canoe trail joining the Pemigewasset River).  <u>Fish</u> (river is a significant Atlantic salmon fishery under restoration).
<u>Connecticut River</u>	One mile above Rte 9 bridge to Rte 23 bridge at Walpole	<u>Hydrologic</u> (one of three remaining sparsely developed free-flowing segments of a unique high order river in this section).  <u>Botanic</u> (calcareous soils unique to this segment supports rare plant species unique to this section of the Connecticut River Valley).  <u>Historic</u> (segment includes the site of the first bridge over the Connecticut River, a toll bridge constructed in 1785 in Walpole).
<u>Connecticut River</u>	Confluence with Ompomanoosuc River to South Newbury	<u>Historic</u> (river was intensively used for lumber transport by logging industry).  <u>Hydrologic</u> (one of the last remaining sparsely developed free-flowing segments of a unique high order river in the section).

Wild Ammonoosuc River

Confluence with  
Ammonoosuc River to  
Beaver Pond at head-  
waters

Fish (river is an Atlantic  
salmon fishery restoration).

Ammonoosuc River  
(including)

Maplewood Dam near  
Rte 302 to Bretton Woods

Hydrologic (one of largest rivers  
in this section).

Geologic (segment includes highly  
diverse and steep channel, with  
resultant falls and impassable rapids).

Recreation (a regionally significant  
whitewater canoeing river, with  
gradients of Class II through Class IV).

Smith River

Confluence with  
Pemigewasset River  
to Grafton Center

Geologic (river has most continuous,  
steepest gradients in southern portion  
of this section. Segment includes  
Profile Gorge and a 30' waterfall).

Recreation (regionally significant  
whitewater stream with rapids of  
Class III and IV gradient).



STATE OF NEW HAMPSHIRE  
Office of Coordinator of Federal Funds  
STATE CLEARINGHOUSE  
State House, Concord 03301  
(603) 271-3783

December 1, 1980

U. S. Dept. of Energy  
Bonneville Power Administration  
Environmental Planning Section - EMEC  
P. O. Box 3621  
Portland, Oregon 97208

Re: CH 156.81

Gentlemen:

Enclosed find written comments relative to the Supplemental Environmental Impact Statement on the Dickey-Lincoln School Lakes electrical transmission system, per your instructions of October 11, 1980.

If we can be of further assistance, please let us know.

Sincerely,

*James M. Clary*  
Coordinator of Federal Funds

jrm



STATE OF NEW HAMPSHIRE  
Office of Coordinator of Federal Funds  
STATE CLEARINGHOUSE  
State House, Concord 03301  
(603) 271-3783

RECEIVED  
*mm*  
OCT 28 1980  
NEW HAMPSHIRE  
WATER RESOURCES BOARD

REQUEST FOR REVIEW OF PROJECT NOTIFICATION

To: ☒ Water Resources Board  
Governor's Council on Energy  
Dept. Public Works & Highways  
N.H. Fish & Game Department  
\*DRED/Forests and Lands  
\*DRED/Off Highway Vehicles  
\*DRED/Parks and Recreation

Date: October 27, 1980

CH Number: 156.81

SAI Number: NH81102201

Applicant: U.S. Department of Energy

\*please see reverse side

Program: Draft Supplement Environmental

Impact Statement-Dickey-Lincoln School Lakes

Transmission Project

Return Prior To: November 21, 1980  
(Date)

NEW OF REC'D

The attached Federal Assistance request is forwarded for your review and comments, if any. The review should focus especially on the project's compatibility with the plans, programs and objectives of your agency. If more information is required to complete the review, please contact:

Timothy J. Murray - DOE

Tel: (503)234-3361 ext.4611 (Portland, OR)

or this office at (603) 271-3783.

It is important that the original copy of this review be returned to this office prior to the date shown above, because non-receipt of the review implies tacit consent. Should more time be required to complete the review, please contact this office.

COMMENTS: (Check one)

☒ Consistent with areawide and/or agency's plans and objectives.

☐ Inconsistent with present and/or potential plans, programs and objectives. (Explain below)

☐ No existing plan or objectives relative to this proposal.

ADDITIONAL COMMENTS: (Use reverse side or separate sheet if necessary).

Reviewer's Signature: George McGee Sr.

Date: \_\_\_\_\_

Title: \_\_\_\_\_

Tel. No.: \_\_\_\_\_



28

STATE OF NEW HAMPSHIRE  
Office of Coordinator of Federal Funds  
STATE CLEARINGHOUSE  
State House, Concord 03301  
(603) 271-3783

REQUEST FOR REVIEW OF PROJECT NOTIFICATION

To: Water Resources Board  
Governor's Council on Energy  
✓ Dept. Public Works & Highways  
N.H. Fish & Game Department  
\*DRED/Forests and Lands  
\*DRED/Off Highway Vehicles  
\*DRED/Parks and Recreation

Date: October 27, 1980

CH Number: 156.81

SAI Number: NH81102201

Applicant: U.S. Department of Energy

\*please see reverse side

Program: Draft Supplement Environmental

Impact Statement-Dickey-Lincoln School Lakes  
Transmission Project

Return Prior To: November 21, 1980  
(Date)

NOV 11 1980

The attached Federal Assistance request is forwarded for your review and comments, if any. The review should focus especially on the project's compatibility with the plans, programs and objectives of your agency. If more information is required to complete the review, please contact:

Timothy J. Murray - DOE

Tel: (503)234-3361 ext.4611 (Portland, OR)

or this office at (603) 271-3783.

It is important that the original copy of this review be returned to this office prior to the date shown above, because non-receipt of the review implies tacit consent. Should more time be required to complete the review, please contact this office.

COMMENTS: (Check one)

- ( ) Consistent with areawide and/or agency's plans and objectives.
- ( ) Inconsistent with present and/or potential plans, programs and objectives. (Explain below)
- (X) No existing plan or objectives relative to this proposal.

ADDITIONAL COMMENTS: (Use reverse side or separate sheet if necessary).

See attached sheet

Reviewer's Signature: [Signature]

Date: \_\_\_\_\_

Title: [Signature]

Tel. No.: \_\_\_\_\_

29  
If you have  
the to send  
Environmental



STATE OF NEW HAMPSHIRE  
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS  
JOHN O. MORTON BUILDING  
CONCORD, N.H. 03301

JOHN A. CLEMENTS, P.E.  
COMMISSIONER

November 10, 1980

Timothy J. Murray, Assistant Project  
Manager for Environmental Studies  
Department of Energy  
Bonnerville Power Administration  
P.O. Box 3621  
Portland, OR 97208

Dear Mr. Murray:

Subject: Dickey - Lincoln School Lakes Project  
Maine, New Hampshire, and Vermont

We have been asked to comment on the above project.

It appears that Interstate 93 in the area of the Moore  
Reservoir in Littleton should be under construction at the time  
projected for the transmission line construction in the state-  
ment.

Our long-range planning shows no major projects planned  
in the area of the proposed transmission line. In the crossing  
of highways and town roads it should be noted that all rules  
and regulations of all parties concerned should be followed.

Sincerely yours,

Walter F. Mead  
Assistant Commissioner

WFM/gw

Tel: 271-3736



STATE OF NEW HAMPSHIRE

Office of Coordinator of Federal Funds

STATE CLEARINGHOUSE

State House, Concord 03301

(603) 271-3783

OCT 28 1980

*Stone: I gave  
Gis-Manning a copy  
to comment  
/ACH*

REQUEST FOR REVIEW OF PROJECT NOTIFICATION

To: Water Resources Board  
Governor's Council on Energy  
Dept. Public Works & Highways  
✓ N.H. Fish & Game Department  
\*DRED/Forests and Lands  
\*DRED/Off Highway Vehicles  
\*DRED/Parks and Recreation

Date: October 27, 1980

CH Number: 156.81

SAI Number: NH81102201

Applicant: U.S. Department of Energy

\*please see reverse side

Program: Draft Supplement Environmental

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ADDITIONAL COMMENTS: (Use reverse side or separate sheet if necessary).  
Draft EIS identifies all Fish and Game interests affected by the proposed transmission facilities. There are specific habitat areas for deer and the peregrine falcon that deserve priority consideration.

Reviewer's Signature: Charles E. Barry

Date: November 21, 1980

Title: Charles E. Barry  
Executive Director

Tel. No.: 271-2461



STATE OF NEW HAMPSHIRE  
Office of Coordinator of Federal Funds  
STATE CLEARINGHOUSE  
State House, Concord 03301  
(603) 271-3783

00128 1981

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ADDITIONAL COMMENTS: (Use reverse side or separate sheet if necessary).

*The proposed route including segments 51, 83, & 114 may be adjacent to perfect Deer yards. Segment 82 crosses west Bunch yard and will not intrude into Foster Swamp yard. Use of existing right of ways will minimize impacts*

Reviewer's Signature: Harold Chmell

Date: 11/20/80

Title: Chief of Game Management & Research

Tel. No.: 271-3783



32

STATE OF NEW HAMPSHIRE  
Office of Coordinator of Federal Funds  
STATE CLEARINGHOUSE  
State House, Concord 03301  
(603) 271-3783

REQUEST FOR REVIEW OF PROJECT NOTIFICATION

To: Water Resources Board  
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☒ No existing plan or objectives relative to this proposal.

ADDITIONAL COMMENTS: (Use reverse side or separate sheet if necessary).

Reviewer's Signature: C. N. Hendry

Date: 12/5/80

Title: Chief Land Management

Tel. No.: 271-3456



STATE OF NEW HAMPSHIRE  
Office of Coordinator of Federal Funds  
STATE CLEARINGHOUSE  
State House, Concord 03301  
(603) 271-3783

NO ANSWER  
WAIVED  
BY 10/15/80

REQUEST FOR REVIEW OF PROJECT NOTIFICATION

To: ~~Water~~ Resources Board  
Governor's Council on Energy  
~~Dept. Public Works & Highways~~  
~~N.H. Fish & Game Department~~  
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Reviewer's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_ Tel. No.: \_\_\_\_\_